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# East Europe Report

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## EAST EUROPE REPORT

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AGRICULTURE

GERMAN DEMOCRATIC REPUBLIC

RELIANCE ON NATURE REDUCES FARM PRODUCTION COSTS

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol. 33 No 7, Jul 1985, pp 997-1008

[Article by Wolfgang Mueller, certified sociologist, certified agronomist, graduate instructor at the Institute for Socialist Political Economy; Academy of Social Sciences, CC SED. Original title: "Comprehensive Intensification of Agriculture and More Effective Utilization of Nature."]

[Text] Over the past several years, the cooperative farmers and workers in socialist agriculture have been doing an ever-better job in meeting the requirements arising from economic strategy in terms of the further development of agriculture.

It was possible to establish at the Ninth Conference of the SEC Central Committee that the constant increase in yields and service performance is now taking place against the background of a better ratio between expenditure and results. (Footnote 1) (Ninth Conference of the SED Central Committee, "From the report Politburo to the Ninth Conference of the SED Central Committee," reporting officer: E. Honecker, Dietz Verlag, Berlin, 1984, p 46.) It turns out that it is not only necessary but also possible in agriculture likewise to turn the qualitative growth factors into the decisive factors and thus to achieve growing results without an increase in the employment of resources at the same pace.

The results that have been achieved until now in agriculture in terms of production development or the reduction of the specific expenditure (including the considerable absolute saving of specific assets) justify the conclusion that this marks the initiation of an economic process which is unparalleled in the past development of our socialist agriculture. The transition to comprehensive intensification is at the very center of this process.

It was pointed out already in earlier articles published in WIRTSCHAFTSWISSENSCHAFT that "intensification of agriculture has, for a long time, been the fundamental production development process, because this is the only way to make use of the developing production forces which facilitate the increase in the output volume and the rise in labor productivity." (Footnote 2)

(K. Groschoff, R. Heinrich, H. Wirsig, "Aspects of the Further Intensification of Agriculture in the Light of the Resolutions of the Tenth SED Party Congress," *WIRTSCHAFTSWISSENSCHAFT*, No. 11, 1981, p 1307. See also K. Groschoff, R. Holzberger, W. Schulz, "On Further Socialist Intensification and Rationalization in the Agriculture of the GDR, Especially with a View to Crop Production," *WIRTSCHAFTSWISSENSCHAFT*, No. 12, 1982, p 1798.) The objective of giving intensification on the scale of the entire national economy--and thus also in the national economic sector of agriculture--a comprehensive character creates the new requirements for agriculture. During the 1960's and 1970's, intensification of agriculture was aimed above all at the main production factor represented by the soil and at labor-saving processes; on the other hand, comprehensive intensification is characterized by the fact that all production and reproduction factors are now included in the intensification process. The comprehensive intensification of agriculture can be achieved only if the intensification process, in contrast to the 1960's and the 1970's, is continued with a new quality, that is, a quality which will mean that the production results will grow faster than the effort required for this in terms of social labor.

The further intensification of agriculture calls not only for a mere continuation of past development tendencies. (Footnote 3) (Cf., W. Heinrichs, "Comprehensive Intensification and Reproduction Theory," *WIRTSCHAFTSWISSENSCHAFT*, No. 7, 1984, p 962.) Instead, comprehensive intensification requires the production results, especially in crop production, to grow at a considerably higher rate and that hitherto unseen growth rates be achieved by means of increasingly asset-saving production. This change in the intensification process of agriculture is frequently also referred to as "consistent continuation of intensification" "In-depth intensification," and "higher stage of intensification." But this does not adequately clarify that which is qualitatively new in the agricultural intensification process. The labor-saving and asset-intensive processes, which predominated in agriculture during the 1960's and 1970's, must be converted into labor-saving and asset-saving processes. This is more than just a new step in intensification; the essence of this development is characterized more accurately by the term "new quality of intensification."

Comprehensive intensification requires greater effectiveness on the part of the subjective factor, as well as the acceleration and faster utilization of scientific-technical progress. In addition there is the fact that increased consideration of the territorial factor is absolutely necessary in an effort to increase the output coupled with a simultaneous effective improvement in agriculture, because the production effort as such is fixed in terms of location, especially as regards the unalterable extent, in terms of area coverage, of the soil as a main production factor, as well as the close reciprocal relationships in the soil--crop--animal--soil cycle. In addition to these three factors, the more effective utilization of nature is an essential requirement for the comprehensive intensification of agriculture. (Footnote 4) (Cf., K. Ahrends, U. Neubauer, "On the more Effective Utilization of Nature--Especially the Soil--in Agriculture," in this issue.)

All agricultural production is based on the utilization of natural resources and natural conditions. In the process of the comprehensive intensification of

agriculture, the more effective utilization of nature moves increasingly to the focus of both agricultural research and agricultural practice. The increase in production in agriculture is primarily tied to the better mastery of natural, especially biological processes. If we are successful in better exhausting the free services connected with nature, then we can bring about positive effects on the development of effectiveness. Questions connected with this carry decisive weight regarding economic strategy in agriculture.

Other branches and sectors of the national economy are also influenced more or less powerfully by the blessings or scourge of nature, for example, by the weather and by changing conditions in the exploration and mining of raw materials and energy sources. "The various natural conditions of labor mean that the same quantity of labor ... will meet different volumes of need, in other words that, other things being equal, the necessary working time will differ." (Footnote 5) (K. Marx, F. Engels, "Werke," Dietz Publishers, Berlin, 1956-1968, Vol. 23, p 537.) The agricultural reproduction process, however, is influenced not only by natural conditions; instead, these conditions here are direct growth and effectiveness factors in combination with the natural resources. The utilization of natural resources and natural conditions is not only a factor in raising labor productivity in agriculture but it is above all from the very beginning a fundamental condition for the production of agricultural products. This has far-reaching effects on the concrete course of the production and reproduction process and the way it shapes up.

Foodstuffs will continue to consist of vegetable and animal products or will be obtained through cultivation and processing also for the foreseeable future. The increase in foodstuff production thus presupposes increasing production especially as regards crop products. Vegetable and animal products by no means lose importance also regarding their raw material function with respect to other industrial branches; on the contrary, the requirement for agricultural raw materials will continue to rise in the future. This springs above all from the fact that agricultural raw materials are reproducible in an expanded manner because their source--in the final analysis, the soil--is not exhausted, but will become more and more productive if it is treated properly.

The effectiveness of nature and its ever better utilization are and remain the essential foundation of agricultural production. Nature in the past likewise played an important role in agricultural production, regardless of the way it was reflected in theory. Under the conditions of the transition to the asset-saving type of intensively expanded reproduction, one must however thoroughly rethink its utilization. Here, two problems carry particularly great weight: first of all, it is necessary to discover additional possibilities and implementation conditions for the more productive utilization of nature. Second, all free services connected with the effect of nature must be explored more accurately and must to the highest possible degree be exploited in the effort to reduce the expenditure of assets in agriculture. The ratio between expenditure and result in agriculture is decisively influenced by the degree which these free services are thoroughly utilized.

These free services in particular include the following:

the ability of the soil to produce certain yields in combination with labor and with agricultural useful crops;

the biological substance formation and substance conversion processes of useful crops, useful animals, and microorganisms;

solar radiation, natural precipitation, climatic factors, and natural forces.

The better utilization of the free services provided by nature at least calls for the following three things:

First, nature can become more productive if the potentials of such natural resources as soil, plant, and useful animals but increasingly also various microorganisms are enlarged. This calls for an increase in soil fertility as well as plant and animal breeding work; here, significant possibilities arise in breeding precisely due to new methods.

Second, the effective utilization of nature essentially depends on how we manage to counter negative effects upon agricultural production and the production results deriving from nature and what kind of effort is required for this. This points to certain conclusions, among other things, regarding the utilization of favorable time intervals, the degree to which agricultural equipment can be used under unfavorable weather conditions, the supply of additional water during dry spells, the decline in the vulnerability of useful crops and useful animals to certain effects deriving from the weather, as well as damage-causing and disease-causing factors. In connection with this, we also encounter higher requirements in terms of the performance readiness of the cooperative farmers and workers in agriculture in terms of their flexibility and availability for work, especially under the most favorable weather conditions.

Third, nature's free services grow all the more, the better we manage to prevent or restrict certain negative influencing factors. This, on the one hand, includes undesirable side effects upon the environment which derive from intensification and which, in longer-range terms, have negative repercussions on intensification results in agriculture. Besides, this also involves the ultimate effects on nature which result from the violations of agricultural cultivation and animal-keeping requirements and laws and which must be compensated by means of an additional effort, to the extent that this is at all possible. Compliance with the time intervals that are favorable in crop production in terms of agricultural technology continues to be a timely problem here. Any deviation from these deadlines means that the yield potential is not fully exhausted or at a greater effort will become necessary in terms of seeds, mineral fertilizer, and often also human labor, equipment, and energy. Meeting agricultural-technical deadlines depends especially on the available agricultural equipment, above all its availability during the most favorable equipment utilization intervals, but also on the way the crop sequence is developed, on the variety structure, and on work organization.

Table 1. Share of Winter Wheat Surface Areas Cultivated by Deadlines (Percent) and Yield Loss Per Day of Delayed Seeding

Deadline	Share of Cultivated Surface				Yield Loss dt/day
	1976	1979	1980	1982	
Winter barley	20 Sep	80	76	72	0.37
Winter rye	10 Oct	75	69	87	0.20
Winter wheat	20 Oct	65	88	74	0.15

[dt--deciton = 100 kg]

Source: K. Herrmann, "Requirements for the Processes of Wheat Production and their Mechanization," GETREIDEWIRTSCHAFT, No. 11, 1984, p 251. R. Bernard, "Late Seeding Reduces Yield," NEUE DEUTSCHE BAUERNZEITUNG, No. 33, 1984, p 4.

Table 1, for the year 1982 alone, for example, shows arithmetically an absolute yield loss of more than 7,500 metric tons per day of delayed seeding for the three wheat varieties given. Here we must not overlook the fact that the use of identical agricultural-technical deadlines both for all locations and for the individual years is only inadequately geared toward tapping the particular reserves. Considering the specific territorial conditions, as well as the annually varying phenological development, agricultural-technical deadlines should be determined specifically in terms of species, varieties, locations, and years even better than this has been done so far and should be made the foundation of practical work.

Another problem involved in the better and more thorough utilization of nature in agriculture is represented by the arrangement of the crop sequence. The time sequence and, to a certain degree, also the local parallelism in the planting of the various agricultural crops result in a large number of effects upon the level of the yields as well as the efforts necessary to achieve those of the basic principles of scientific crop sequence arrangement are mostly connected with the inadequate utilization of nature, the more frequent appearance of harmful viruses, plant diseases, and weeds that are difficult to control, as well as increased expenditures that do not yield any additional output. Progress in the utilization of the crop sequence effects has become visible, especially over the past 3 years due to greater stability in the organization of the LPG [agricultural producer cooperatives] and VEG [state farms], due to the better utilization of in-house reserves and greater effectiveness of agricultural production.

The use of scientifically-based, more stable crop sequences is extremely important for the more effective utilization of nature and thus also for an increase in crop production, coupled with a reduction in the specific expenditure. On the one hand, this directly opens up vast production reserves and, on the other hand, one can achieve a series of expenditure-reducing effects. It is the goal of crop sequence planning to keep any disturbances in the biological equilibrium as small as possible. The smaller these equilibrium disturbances, the less will

be the expenditure in terms of labor and assets for the purpose of blocking any yield-reducing factors. Reproducing so as to save assets therefore means that one must pay more attention to these natural relations. This aspect moreover is further backed by the fact that the resistance of such damage-causing factors as harmful insects, fungal viruses, bacteria, and other viruses against pest control agents grows rapidly. These factors especially underscore the significance of scientific crop sequences in crop production. Besides, it now becomes clear that it is necessary in plant protection strategy more quickly to switch to what is called "integrated plant protection," i.e., the more effective combination of organizational, breeding, biological, physical, and chemical measures in an effort to reduce yield losses more effectively, to lower the required expenditure, and to avoid any impairment of the environment.

The utilization of natural forces is playing a growing role in reducing the expenditure of assets in agricultural production. Karl Marx already assigned a great economic effect to the utilization of natural forces. "Constant capital can be released without devaluation if--through improvements, the use of natural forces, etc.--a constant capital of lesser value is enabled technically to perform the same service as a higher-grade capital did before." (Footnote 6) (*Ibid.*, Vol. 25, p 127) An example from animal production is intended to make it clear that it is not the "neutralization" of natural forces and conditions but rather their efficient employment that facilitates greater effectiveness and can contribute to the desired expenditure reductions: most of the total energy consumption needed to guarantee favorable animal-keeping and environmental conditions is used up above all in modern installations with a high animal concentration (but partly also in those with medium concentration). Initial practical results show that considerable savings are possible both in terms of current and in terms of one-time expenditures also under such conditions due to the utilization of natural processes and factors if the laws of aerodynamics are used and if the possibilities of heat recovery are employed at a high scientific level. Savings of 80 percent of the electric energy consumption and 90 percent of the investment expenditure for the ventilation component or also 70 percent of the total energy expenditure were achieved for example in various animal production installations.

In addition to these and similar possibilities for the better utilization of natural forces aimed at more effective agricultural production, lasting and repeatable growth and effectiveness sources in agriculture are tapped above all when the potentials of natural resources represented by soil, plant, animal, and microorganism are increased in a specifically goal-oriented manner and are exploited much more thoroughly. Here, the full utilization of the potentials of natural resources depends especially on the effectiveness of the subjective factor, on the scientific discovery and mastery of natural processes, as well as on the effectiveness of agriculture's material-technical base.

#### On the Utilization and Further Development of Agriculture's Material-Technical Base

The makeup, efficiency, and structure of the elements of the agricultural material-technical base to a great extent influence the effectiveness of nature as well as the level and structure of necessary expenditures. Goal-oriented

utilization and the further development of technical agricultural equipment and of chemical application agents are particularly important in terms of the more effective utilization of nature. On the one hand, the course of the natural metabolism processes is influenced directly with their help; on the other hand, they have great quantitative and qualitative dynamics in their development. There are above all four aspects that are particularly important in the utilization and development of agricultural equipment.

First of all, nature can be utilized better if the capacity of the equipment guarantees the more accurate compliance with more favorable agricultural-technical deadlines and with time intervals that are more specifically determined as regards the zootechnical aspects. This calls for a corresponding machinery and equipment capacity as well as a high equipment availability and reliability level. The necessary capacity should also include corresponding reserves because, depending on the weather, the scope of work to be done and the time intervals available for this will also vary. The optimum between the level of equipment coverage and deadline compliance has changed under the altered reproduction conditions. Today, reducing losses--for example, by doing a better job in meeting deadlines--is at least as important as the direct output increase. In addition to more efficient special equipment, multipurpose equipment and universal machines or also machine parts and structural components are assuming greater significance from the viewpoint of greater basic assets savings.

Second, we must do a better job in reducing and increasingly preventing undesirable side effects deriving from the use of equipment. Reducing the pressure exerted upon the soil by mobile farm equipment in crop production and, to a certain degree, also the reduction in the side effects of mechanization in animal production which impair the health and productivity of animals are decisive here. Soil compacting due to damage can be corrected only as a result of a great effort in terms of human and materialized labor, above all with a very high energy expenditure. A lesser expenditure however is required when the pressure on the soil has been reduced in advance by means of organizational, technological, and technical measures. Besides, one can then prevent the impairment of the soil's productivity.

Table 2. Effects of Wheel Pressure on Soil Properties, Yield, and Quantity of Harvested Crops

	No Vehicular Movement	Tractor's K700 ZT 300 K700 Rv	Wheel Pressure Sb
Soil water conductivity (m/d)	2.67	0.60	0.36
Potato yield (percent)	100	78	62
Sugar beet yield (percent)	100	-	82
Summer barley yield (percent)	100	-	90
Share of potatoes with more than 40 mm diameter (percent)	85	80	78
Share of bony beets (percent)	18.4	-	46.1

Sb--standard tires

Rv--wider wheels

Source: D. Ermich, B. Hofmann, "We Welcome Anything that is Kind to the Soil," NEUE DEUTSCHE BAUERNZEITUNG, No. 11, 1984, p 4.

The basic rules of soil-sparing work are being applied increasingly in the employment of agricultural equipment. Equipment is driven over the soil only if the soil has dried out adequately; the specific pressure upon the soil is reduced by means of double tires and by reducing the inside tire pressure; unnecessary trips carrying loads and deadhead runs on arable soil are avoided from the very beginning by the way in which the fields are laid out; the combination of machinery and equipment as well as properly coordinated working widths can help reduce the frequency with which equipment is driven over the fields. Reducing the number of trips by heavy transportation equipment deserves even greater attention, in particular, because this heavy equipment leads to considerable compacting and structural damage.

A major point in the perfection of equipment used in animal production consists in the improvement of fodder dosing accuracy. Currently prevailing deviations from the planned energy and nutrient quantities are by far greater than the adaptability of the animals would permit. This does not fail to have an effect on performance, animal health, and the effectiveness of fodder utilization. New dosing principles must be used to make sure that the planned energy and nutrient quantity will actually reach the animal or the corresponding group of animals. This is connected with considerable output-increasing expenditure-reducing, and effectiveness-improving effects.

Third, the way in which agricultural equipment can be adapted to differing operational conditions plays an ever-greater role. The level which has been reached here shows clearly that both the utilization spectrum of agricultural equipment and its modifiability do not adequately meet the differing operational conditions. At the same time, greater variety of types and variations in the equipment would have a positive effect on the better utilization of all available resources. This concerns especially equipment utilization under various weather conditions, the gathering of different levels of yields, as well as differentiated geographic conditions. In livestock production, for example, feeding equipment should be so modifiable that--corresponding to the harvest results in crop production--various types of fodeer can be used and assimilated effectively.

Table 3. Compliance with Feeding Requirements in Terms of Days and Individual Fodder Conveyer Belts

	Fodder Quantity Actually Dosed (Standard Requirement = 100)	
	by Days	by Fodder Issue Stations
Green forage	104.4 - 138.5	44.4 - 333.1
Wilt ensilage	60.7 - 147.2	54.2 - 435.0

Source: H. Fitzthum, M. Weber, "Investigations on the Improvement of Fodder Utilization under the 1930 Supply Project," AGRARTECHNIK, No. 1, 1984, p 28.

Fourth, the utilization of natural forces for the purpose of procuring energy, at least within certain processes and certain locations, represents a genuine alternative to the energy forms used until now, if corresponding technical solutions are available for this. The simplest possible solutions are wanted for the purpose of making use of these natural forces (solar energy, wind energy, water power). This also applies to technical solutions aimed at the recovery or utilization of secondary energy. These possibilities can be implemented in practice in agriculture at a fast pace only if this brings about improvements in operational effectiveness. As a rule, however, the use of brown coal and electric energy by agricultural enterprises is still connected with a lesser expenditure than is the use of natural forces and secondary energy. This is why the utilization of these alternatives should be stimulated much more from the viewpoint of the overall national economic equation.

The implementation of the resources-saving type of intensification, which simultaneously is connected with a reduced environmental stress, calls for an efficient combination of the effects resulting from the use of nature and the application of agricultural chemicals. Effectiveness losses appear in agricultural production whenever the effective combination of agricultural chemicals with each other and with the other intensification measures is inadequately mastered and when chemical agents are used to compensate for the insufficient exploitation of nature. The important thing is to utilize all free services provided by nature as much as possible and to enhance those services through the use of agricultural chemicals. This means that certain agricultural chemicals, whose effectiveness is no longer sufficient today, must be replaced; the quality of most of the presently used agents must be improved and the reciprocal relationships between nature and the use of chemical agents in agriculture must be explored and exploited even more accurately.

#### Specific Conditions Call for Differentiated Solutions

In the real agricultural reproduction process, nature appears not just in the form of soil, plant, animal, water, or weather, but always as a very specific concrete phenomenon. Table 4 shows some of this versatility, starting only with the soil. Other factors relating to specific locations, such as, for example, the relief, climate, and phenology, increase the versatility of the specific production conditions.

Table 4. Size of Various Location Groups and Their Shares in the Agricultural Utilization Area of the GDR

Location Group	Surface Area 1,000 ha	Share of Agricultural Utilization Area (Percent)
1 Sandy sites far from underground water	417	6.6
2 Sandy and deep loam sites	532	8.5
3 Deep loam and loam sites	960	15.3
4 Deep loam and loam sites with stagnating water	645	10.2
5 Flood plain loam sites	333	5.3
6 Flood plain clay sites	133	2.1
7 Low moor sites	476	7.5
8 Underground water sand sites	588	9.3
9 Black-earth sites	767	12.2
10 Brown loess sites	369	5.9
11 Loess sites with stagnating water	224	3.6
12 Deep-base mountain loam and mountain clay sites	277	4.4
13 Mountain loam sites with stagnant water	439	7.0
14 Mountain loam sand sites	133	2.1

Source: According to Schmidt, Kugler, Richter, Ewert, ARCHIV ACKER-UND PFLANZENBAU UND BODENKUNDE (Archive of Crop Farming and Plant Cultivation and Soil Science), 22, 1978.

In addition to other differences, the various soil sites are an important point of departure for necessary differentiations in the intensification directions and measures. A very special soil location, a crop and an animal that are very specific in terms of type, development level, and productivity must always be used more effectively. The other natural resources and conditions can also be used to a different degree in terms of place and time.

The more effective utilization of nature is a basic requirement for the new quality in agricultural intensification. Paying more attention to and fully utilizing the particular specific conditions thus fashion the further intensification of agriculture. This means that greater differentiation is necessary in terms of the directions of intensification. The way we consider the differentiated conditions under which nature is being utilized will essentially decide the output and effectiveness growth and thus also the tempo of comprehensive intensification.

The more effective utilization of nature also calls for greater flexibility in work organization. In keeping with the way in which the weather develops specifically, we must in each case aim at the optimum combination of elements

of the production process, especially human labor and basic assets, in order, on the one hand, to make maximum use of the most favorable deadlines and, on the other hand, to ensure a high degree of work capacity and basic assets utilization. This creates higher requirements in terms of the flexibility of the managers and the availability of cooperative farmers and workers in agriculture.

The more comprehensive utilization of nature in the reproduction process of agriculture at the same time calls for greater complexity of intensification measures. Output and effectiveness growth depend decisively on the way in which we manage to create all of the conditions required to achieve a high output. If we disregard just one factor, if we cause only a single gap in the intensification process, there is the danger that the possible result cannot be achieved with the help of the other measures--and that for the most part includes expenditures that have already been made. If we can ensure a high degree of complexity in the intensification measures, we will find that combination effects will furthermore emerge from the interaction between the various intensification factors.

Great results can be achieved if the yield-increasing and performance-improving measures are combined in an optimum fashion and if they are differentiated according to the type of soil, the weather, plant growth, the output and development level of the animals, as well as the scope of the result-reducing influencing factors which must be averted. Work based on field-related maximum-yield or stable-related maximum performance concepts is in keeping with these requirements. In this way we are implementing a new quality of production management which will be field-related in terms of specific crop types or stable-related in terms of specific animals. This type of management is based on a thorough analysis of the results and of the essential factors that determine the yield and the performance, both according to enterprises, sectors, divisions, and brigades and according to crop types and fields or animal species and stables. These concepts offer new possibilities for a closer tie-in between science and practice and represent a main area for the transfer of scientific-technical progress. It is especially the guarantee of greater differentiation and complexity of intensification measures that makes management documents of this kind increasingly indispensable today. The practical application of these concepts proved that high yields and performances can be achieved along with rising effectiveness if the particular production method is being mastered in keeping with the specific location and the specific animal. The most favorable measures must be spelled out on the basis of the differing soil properties and the particular, very specific state of the soil, the development of the crop inventory, and the productivity of the useful animal. A stereotyped approach in the form of identical methods applied in all fields and in all stations will make only inadequate use of all of the potentials offered by natural resources and is connected with a higher specific expenditure.

The better utilization of the differing yield, performance, and effectiveness potentials creates new requirements in terms of the collection and processing of data on the actual states of the factors that determine the yield, the performance and the expenditure. Satisfactory results cannot be achieved only by a visual and manual evaluation and by the analysis of individual properties

of natural resources. The spectrum of obtainable data as well as the data density can be expanded considerably through the use of microelectronics. This offers many different possibilities for doing a better job in meeting the biological requirements of plants and animals. Here it is not always enough to obtain more exact data only at certain periodic intervals; it is necessary moreover specifically to spell out the scope and the most favorable deadline for the particular intensification measure directly at the place of utilization. This requires mobile technical and material aids, especially measurement and analysis instruments, as well as reagents. In this respect it would be good for the further intensification of agriculture to determine the requirement for such fast detection instruments via a central design and to facilitate or increase their supply on short notice.

Data procurement however is only one aspect of the specific differentiation of intensification measures. At the same time it is necessary better to adapt agriculture's material-technical base to the differing natural conditions both between the territories and depending on the weather. This can involve more productive varieties also for some of the poorer sites, varieties with a greater tolerance for dryness, breeds that are better able to assimilate available fodder, as well as greater variety in the types and versions of farm equipment. The LPG and VEG themselves are making a great contribution to the adaptation of farm equipment to the specific production conditions. But this very often requires a very great effort in terms of design work. Above-enterprise rationalization equipment construction in agriculture has proved itself here likewise. It would be good in terms of improving the ratio between expenditure and result if the farm machinery and tractor construction industry would in the future guarantee a greater assortment of models and if it were possible to provide for less expensive conversion and accessory facilities already during the design phase. This also is determined by the ultimate users of farm equipment. Farm equipment could then be better adapted to the corresponding conditions through accessories, exchangeable tools, and other modifications. This would have a good effect on the yields and the specific expenditure due to the more precise compliance with agricultural-technical deadlines.

Measures aimed at better utilizing nature for the sake of a dynamic growth of production and effectiveness have differing effects on the economy of the individual expenditure types and call for expenditures that differ in terms of their levels and their structure. It is absolutely not true that a rise in the yield indexes can in every case be achieved without any additional expenditure in terms of social labor. The following groupings can be set up with respect to the necessary expenditures for the more effective utilization of nature.

The first group could include measures which, for example, call for the better utilization of crop sequence effects and more favorable variety selection and which do not require any additional asset expenditure but which can even lead to a reduction, above all, of current expenditures and to the rise in production results. These measures must be used quickly and even better at every location.

In the second group we can combine means and methods which with a relatively minor expenditure already contribute to the better utilization of the differentiated conditions. This calls for certain aids to be used in determining the

specific actual conditions. Through greater differentiation of expenditures, through their consistent orientation towards an individual field or part of a field, or toward the particular group of animals and the individual animal, one can even produce a given quantity with less expenditure or one can achieve a greater output with the same expenditure. In the process, the specific production consumption goes down and the effectiveness goes up.

A third group comprises measures which call for a major, one time expenditure for the sake of the better utilization of nature. This expenditure can even be greater than the output increase and can thus have an asset-intensive effect but leads to significant specific and partly also absolute savings in current expenditures. These measures most of the time have a long-term effect. Here we might list, for example, possibilities of output-oriented feeding by means of automatic animal identification, the increase in the number of certain specific pieces of machinery and equipment in order better to comply with agricultural-technical deadlines, engineering solutions aimed at the utilization of natural forces, as well as environmental promotion measures which will have a positive effect on the intensification process in agriculture.

All of these measures are important to the transition to the new quality of intensification. Their practical application depends on the specific conditions. Measures which can be implemented without any major asset expenditure and which in particular require greater effectiveness on the part of the subjective factor must above all be quickly applied on a broad scale.

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AGRICULTURE

POLAND

CHANGES IN AGRARIAN LAND USE PATTERNS DURING 1981-84

Warsaw NOWE ROLNICTWO in Polish No 7-8, Jul-Aug 85 pp 6-9

[Article by Anna Szemberg: "Land-Use Management and the Agrarian Structure: 1981-1984 Balance-Sheet"]

[Text] More economical land-use management was a characteristic feature of the period. The amount of farmland lost was 41,000 hectares (during the preceding 3-year period, it was approximately 81,000 hectares). (Footnote 1) (The statistical material for this part of the article comes from farm records and GUS statistics on the turnover of PFZ lands). This was related both to the curtailment of capital spending projects and to the stiffening of protective regulations. It likewise emanated from the growth of social concern and responsibility for the land. At present there are 0.52 hectares of farmland per inhabitant.

In the sector structure of land utilization, the changes were insignificant and not multipurpose. The net result of these changes was that arable land on the private farm increased by 1.9 percent and arable land in the socialized sector decreased by 6.4 percent. The largest decline (about 50 percent) occurred in land area on the group farms of farm circles, i.e., in that form of management whose economic results were the most negative on the overall scale. The relative losses on PGR's and RSP's were far lower (4 percent and 10 percent respectively). The setting in order of land-use management and the related transfer of lands from socialized enterprises to the PFZ's are primarily a consequence of the new economic-financial system. As a result, the share of farmlands by sector changed in the following manner (in percentages):

Table 1. Changes in the Share of Farmlands by Sector (in percentages)

<u>Sector</u>	<u>Year</u>	
	1981	1984
private farm (including plots)	74.9	76.4
state farms	19.4	18.8
socialized production farms	4.1	3.7
KR group farms	0.9	0.5
nonfarm state lands	0.7	0.6

Land turnovers between PFZ's and all of agriculture exhibited a decline from year to year. This trend was impacted by declines both in earnings and expenditures (in thousands of hectares of arable land):

Table 2. Decline in Socialized and Private Farming Income and Expenditures From 1981-1984

<u>Item</u>	<u>Year</u>			
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
total earnings	303	145	97	97
including:				
socialized farms	263	108	54	33
private farms	45	37	43	59
total farm expenditures	189	263	122	84
including:				
socialized farms	24	23	20	17
private farms	165	240	102	67

Income into the PFZ's dropped as a result of two phenomena: 1) a sharp drop in supply from socialized farms; 2) the low level of supply from private farms maintained over the entire 4-year period.

With regard to land disposal, socialized farming continued to hold its minor position; on the other hand, sales for private farmers declined systematically.

The source of such trends was the reduction to a minimum of the reserves of free lands in the PFZ's and the increasing dependence of annual turnovers on sales volumes. As a consequence of this, the role of PFZ lands in the improvement of the agrarian structure of private farming is declining. While the positive balance of turnovers between the PFZ's and private farms was maintained for the entire period, its volume declined very significantly from 203,000 hectares in 1982 to 59,000 hectares in 1983 and 8,000 hectares in 1984.

The reduced volume of the sale of lands to private farmers was impacted by various factors that I am taking from a Food Industry Bank report (Footnote 2) (A BGZ report dated 25 January 1985 on the sale of lands, repayment of credit and state of costcutting efforts):

- the overall reduction in the reserves of PFZ lands together with the simultaneous reduced influx of new lands designated for sale,
- the significant distance of a part of PFZ lands from economic centers, their extensive breakup, the lack of access roads, and poor soil quality, all of which complicate or prevent their sale,
- competition for the use of PFZ lands for rental as opposed to their purchase,
- the high price of land and buildings;
- in some regions, the temporary delaying of farmers from purchasing land related to the enactment of the new system for taxing lands,
- the overly long wait on the part of cooperative banks for a decision to be issued by gmina managers establishing candidates for purchase and the delayed submission of measurement-classification documentation.

Not all of the reasons listed were of equal importance in the decline in the sale of PFZ lands. In light of the results of 1984 IERiGZ studies, the low volume of the sale of these lands was of major significance (in many villages, and even entire microregions, no sales of lands to the PFZ took place).

During the period under scrutiny, the major designation of lands purchased from PFZ's was for the increase in the size of existing farms. The volume of new farming on PFZ lands declined from year to year: in 1982, 6,500 such farms were opened up; in 1983, 4,000 began production, and in 1984, the number was 2,800.

The total reserves of PFZ lands are on the decline. However, this decline, which is related to the structure of the utilization of these lands, is relatively minor. Between 1981 and 1984, PFZ land reserves dropped by 18 percent (from 993,000 to 816,000 hectares). In their utilization structure, the most important item is rental (58 percent of the reserves). Among the renters, private farms predominate (94 percent of the rental lands, i.e., 441,000 hectares). Moreover, 153,000 hectares of this land was used for farming, of which 105,000 hectares was for the lifetime utilization of annuitants and 48,000 hectares was used by private farmers without a contract. This left 192,000 hectares (24 percent of the total lands) under the direct administration of PFZ's, of which 88 percent were the poorest lands, primarily forest that is not suitable for farming. As this shows, the PFZ's no longer have any "free" land reserves.

The declining supply of PFZ lands, coupled with the continuing demand for land, led to an increased interest by farmers in private turnovers. The following illustrates the structure of such turnovers:

Table 3. Structure of Private Land Turnovers From 1981 to 1984

<u>Year</u>	<u>Number of Purchase/Sale Transactions</u>	<u>Number of Gifts</u>	<u>Price per Hectare of Land</u>
1981	24,465	8,002	37,900 zl.
1982	24,473	10,952	75,600 zl.
1983	25,697	13,361	118,000 zl.
1984	28,615	16,259	137,000 zl.

Source: data from the Ministry of Justice and GUS

Private land turnovers clearly increased: the number of purchase/sale transactions rose by 16 percent and the number of gifts doubled. On the other hand, the sharp increase in the price of land from 1982 and 1983 was halted in 1984 and more or less corresponded to the increase in the cost-of-living index. The imbalance between the great demand and the meagre supply was a characteristic feature of private farmland turnovers that held through the entire period. A basic factor restricting supply was Poland's overall economic situation.

## Agrarian Structure

(Footnote 3) (In this section, both data from GUS volume statistics (to illustrate quantitative changes) and the results of the 1984 IERiGZ studies (to illustrate the mechanisms of change and the attitudes of farmers) were used. IERiGZ polls are conducted every 3 years in 187 villages of Poland (approximately 20,000 farms and nonfarm families). The study group is representative of the private farm both on the national level and on the level of particular regions.)

The most characteristic feature of the 1981-1984 period was a sharp halt in the process of the reduction in the number of farms. While from 1978 to 1981, the drop in the number of farms was 6 percent, in the last 3 years it was 1 percent. This trend was a general one manifested in all regions of Poland. In terms of land use, the loss of farms ranged between 1 percent and 2 percent (previously it ranged between 5 percent and 8 percent). In the most heavily parceled out regions of southern Poland, the number of farms remained stable. The overall economic situation and continuing difficulties on the food market impacted this trend markedly. These circumstances led farmers to keep their farms as economic security and a source of food supply. At least three other factors helped to cause stagnation in the number of farms: low farm pensions, the expected change in the orientation of the younger generation and the severely curtailed migration of entire families related to the liquidation of the farmstead.

Despite these unfavorable conditions for improving the structure, tendencies toward land concentration still continued (table 4 and table 5). On the national level, the number of farms of over 10 hectares rose by 7 percent, causing an increase in their share from 15.1 percent to 16.3 percent, and an increase in the share of arable lands held by them from 40.5 percent to 44.1 percent. This trend likewise was a general one, except in the case of the southeastern region. The number of large farms increased in the regions from 6 percent to 13 percent, and the greatest structural effects were attained there where the agrarian structure was the most favorable from the start (in the northern, west-central and northeastern regions).

In the groups where the area was less than 10 hectares, the universal trend was a decline in the number of farms. This was strongest in the 2-to-5-hectare group. The farms in this group yielded to relatively the most rapid selection, especially in regions with the best agrarian structure. Trends in the group under 2 hectares differed from this. In most regions, the number of these farms remained stable. This may be viewed as a manifestation (albeit a very weak one) of the polarization of the structure, with growth at the poles and a decline in the middle groups.

The improvement in structure demonstrates that the great demand for land has continued. From 1981 to 1984, the area of 13 percent of farms increased as compared to a 15-percent increase from 1978 to 1981. It should be stated clearly that it was possible to realize demand primarily because the land supply in private turnover was supported strongly with PFZ lands (409,000 hectares). Now a few words characterizing supply and demand. Demand focused

basically on the intermediate-area groups (5 hectares to 10 hectares), while supply came primarily from farms smaller than 5 hectares. In addition to the area criterion, other clear divisions also were manifested that depended upon the age of the farm manager, the prospects for continuity on the farm (a successor) and the level of farm investment, particularly with the means of technology. In some rural areas and microregions, the "supply-demand" line of demarcation runs between farmers and the dual occupation populace, with a great demand on the part of farmers and a meagre supply from the dual occupation populace. In the demand incentives, attention is given to an increase in the economic and efficiency-directed thinking of farmers (an increase in the production scale, costs reduction, specialization potential, the more efficient use of machinery and buildings and the like). Engineering incentives are of great significance. For some farmers that increased their area, the primary goal was to obtain the minimal area boundary necessary for being allotted a tractor or machinery. At the same time, it is not merely a question of reducing labor and increasing productivity, but of encouraging or keeping a successor.

Table 4. Changes in Agrarian Structure According to Farm Records Nationwide

Item	Total	Farm Area Groups in Hectares				
		.51-2	2-5	5-7	7-10	10 and more
<b>Number of farms in thousands</b>						
1978	3065	935	926	395	389	420
1981	2866	859	840	364	370	433
1984	2843	856	805	354	365	463
<b>Change in the number of farms</b>						
1981 (1978=100)	94	92	91	92	95	103
1984 (1981=100)	99	100	96	97	99	107
<b>Farm structure</b>						
1978	100.0	30.5	30.2	12.9	12.7	13.7
1981	100.0	30.0	29.3	12.7	12.9	15.1
1984	100.0	30.1	28.3	12.5	12.8	16.3
<b>Structure of arable lands</b>						
1978	100.0	7.3	19.7	15.1	20.9	37.0
1981	100.0	6.5	18.4	14.1	20.5	40.5
1984	100.0	6.1	17.1	13.3	19.4	44.1

Source: 1980 and 1982 Statistical Yearbooks and the results of the 1984 Farm Record published by the GUS publishers, entitled "Zroznicowanie skali i natezenia chowu zwierzat gospodarskich w indywidualnych gospodarstwach rolnych w 1984 r." [Differentiation of the Scale and Intensity of Farm Animal Husbandry on Private Farms in 1984].

Supply incentives lie primarily in the demographic sphere (solitude, lack of manpower, some handicap and the like); more rarely is land supply the result of a decision related to working for pay.

Table 5. Changes in Agrarian Structure by Region

Macroregions	Years	Total	Percentage of farms in area groups (hectares of UR)				Changes in total number of farms	
			0,51-2		2-5	5-7	7-10	10 i wiecęj
West-central	1978	100,0	27,8	20,7	10,8	16,1	24,6	
	1981	100,0	27,5	20,2	10,0	16,0	26,3	94
	1984	100,0	26,8	19,1	9,5	15,4	29,2	98
Central	1978	100,0	21,8	30,0	18,0	16,8	13,4	
	1981	100,0	21,6	28,6	17,6	17,2	15,0	
	1984	100,0	22,5	27,3	16,3	17,6	16,3	99
East-central	1978	100,0	19,0	34,5	18,8	16,4	11,3	
	1981	100,0	18,3	32,1	18,5	17,8	13,3	
	1984	100,0	18,9	30,0	18,1	17,9	15,1	
Southeastern	1978	100,0	35,7	42,3	12,5	6,7	2,6	
	1981	100,0	34,2	42,0	13,1	7,3	3,4	
	1984	100,0	34,3	41,4	13,0	7,9	3,4	
Southern	1978	100,0	51,7	29,0	8,3	6,7	4,3	
	1981	100,0	51,3	28,9	7,9	6,7	5,2	
	1984	100,0	50,7	28,5	8,3	6,8	5,7	
Southwestern	1978	100,0	40,4	21,1	8,9	14,8	14,8	
	1981	100,0	41,6	20,4	7,7	14,0	16,3	
	1984	100,0	41,9	19,4	7,8	12,9	18,0	
Northern	1978	100,0	31,8	17,4	5,8	13,8	31,2	
	1981	100,0	32,8	16,9	5,3	12,2	32,8	
	1984	100,0	32,6	14,7	5,4	10,9	36,4	
Northeastern	1978	100,0	15,2	17,8	11,5	17,5	38,0	
	1981	100,0	15,1	17,1	11,5	16,7	39,6	
	1984	100,0	16,5	15,3	10,0	15,7	42,5	

During the next few years, the demand for land will be below its previous level. In 1984, 9 percent of farmers reported an increase in area as compared to 17 percent in 1981. The following are the causes for the declining demand for land, based on the opinions of those farmers that responded to the institute poll, listed according to frequency of occurrence:

lack of land--54 percent  
demographic phenomena--53 percent  
unprofitability--30 percent  
shortage of technology--24 percent  
dual occupations of populace--19 percent  
patchy landscape--8 percent

In some of the rural areas studied, the land shortage already had occurred by 1981. At present, it is occurring on a considerably broader scale, or will do so in the near future. In many rural areas, this phenomenon is so clearcut that it is termed "land poverty." It appears to be so enduring that some farmers even have stopped declaring their intentions to increase their area, recognizing that "the situation is hopeless." The converse situation (there is land but no demand for it) is rare.

As the preceding data shows, the demographic situation has a very important impact on reducing the demand for land. In many rural areas, the process of the aging of farmers continues and the group of farms without heirs is growing. Both phenomena apply primarily to smaller farms, to rural areas whose land is broken up but whose population is not markedly a dual occupation one. This is not synonymous with the migration of young people away from the village. The typical situation is that there are young people in the village, but most of them do not want to be associated permanently with farming and they consider their stay in the rural area to be a transitional stage. This is expressed in the very great pressure to acquire a nonfarm profession and find a paying job and in their unwillingness to take over the farms.

According to the answers given by those responding to the IERiGZ poll, the reasons for such attitudes are the following: the strenuous, substandard and low-paying work, considerably worse living conditions, the lack of prospects for private farms (especially small ones), management problems (poor procurement and poor service), the low social prestige of the farmer's profession, problems with establishing a family, the lack of attractive ways to spend free time and the like. By comparison with the results of earlier studies, this one notes the growing receptiveness of the younger generation to the entire picture of socioeconomic living conditions, on the one hand, and the lack of faith in the possibility of attaining working conditions on private farms that are comparable to those on socialized farms or in other branches of the national economy, on the other hand.

All this shows that, following a brief period of some improvement, we are once again threatened with regression in the demographic situation. This is not merely a hypothesis. Both stagnation in the number of farms and the situation in the area of generational succession have a markedly negative impact on the demographic structure.

In light of the GUS statistical data, there has been a fundamental curtailment in generational transfers for 4 years. While from 1978 to 1981, an average of 77,000 farms per year were transferred to heirs, during the last 3-year period, this was cut by one-half (37,000 farms). This means that each year, only about 9 percent of the farmers of retirement age transferred their farms to successors, and it puts the rate of generational transfers compared with the total number of farms below 1.4 percent. The continuation of such a slow rate of generational transfer in the future will not ensure an increase in the share of young farmers.

The phenomenon of farms without successors is closely related to the prospects for improving the area structure. The supply of land for the PFZ essentially emanates from this group. GUS data from the past few years demonstrates that each year the number of farms transferring land to the PFZ is growing: in 1982, there were 5,240 such farms, in 1983 there were 6,386 and in 1984 there were 9,000. However, can we expect the continued rapid growth of the supply of land into the PFZ? The results of the IERiGZ studies answer this question. The reduction in the percentage of farms without heirs (from 14 percent to 8 percent) recorded from 1978 to 1981 turned out to be a transitional, short-lived phenomenon. In 1984, the number of such farms once again rose, reaching its current level of 16 percent of the total.

Many older farmers that counted on having their farms taken over by someone from the younger generation have been deluded. However, we cannot expect a rapid drop in farms without successors. This is suggested by the plans of farmers that differ quite substantially at present from their plans in 1981. Formerly, 60 percent of farmers without successors replied that "they have not decided what they will do in the future with their farm." Now the number of such answers is small, while a group of farmers has arisen that clearly has decided to "work the farm as long as possible" or "until the end of my life." This attitude is characteristic of about 30 percent of the entire group. Every fourth farmer without an heir has announced the liquidation of his farm by 1987. The others plan to farm beyond this time. Many of them are trying to sell (or lease) their land privately, counting on the high prices (rents) they can obtain under conditions of an imbalance between supply and demand. Some are transferring their land in the form of gifts in exchange for lifetime care and assistance. Related to this, the number of farmers that are liquidating their farms within the framework of a private turnover is growing. From 1981 to 1984, the percentage of such farms reached 68 percent of the total number of farms that were liquidated (from 1978 to 1981 this figure was approximately 50 percent). Such an action is economically justified, especially in the smaller area groups. The interest on the amount of sale, rental fees or life estates afford better security for old age than farm pensions, especially since in many cases we are dealing with persons that have employee pensions. This shows that it is uncertain whether the increase in the number of successorless farms will be equivalent to the growth of the supply of land into the PFZ. Nor can the previously quoted GUS data be the basis for excessive optimism. Nine thousand farms transferred yearly into the PFZ represent less than 2 percent of all farms without heirs of this type. This means, on the one hand, that a large number of poor farms without prospects for development will go on and that lands that could help to improve the structure will be cut off, on the other.

## The Potential for Accelerating Structural Improvement

The restoration of economic health throughout the entire national economy is basic to stepping up structural improvement. Only in a balanced economy will the economic mechanisms on which the policy of structural change should be based be able to operate effectively. This does not mean, however, that under present conditions we can abandon all efforts to facilitate and hasten these changes to some degree. Changes in agrarian structure are a long-term process that may be strengthened or weakened periodically but that never can disappear from the field of vision of policy.

The next general issue underlying an improvement in agrarian structure is migration. It should be stated clearly that an improvement in structure requires broad possibilities for migration. At the same time, it is important for agrarian changes whether the migration takes place only (or almost only) in the form of migration of the individual (the farmstead remains but the crew declines) or whether in addition to individual migration, there is also the migration of entire families together with the liquidation of the farm.

The current situation may be characterized in the following way: the balance (Footnote 4) (the difference between the influx and outflow) of migration in rural areas (Footnote 5) (Due to a lack of data on migration from private farms, we are presenting data on migration from rural areas.) continued to be negative during the past few years, although it clearly was less than before. The rate was 200,000 in 1980, 171,000 in 1981, 148,000 in 1982 and 139,000 in 1983.

The reduction in migration is a temporary phenomenon, related to the overall economic situation. As we emerge from the crisis and as the investment rate increases, the wave of migration again will rise. Every increase in the near future will be felt more severely in farming than previous increases, for the number of age groups reaching production age will be lower. More difficult to resolve and more unfavorable from the viewpoint of structural improvement is the fact that individual migrants dominate in the overall migration from farming, while the migration of families was and still is negligible. I do not envisage a possibility for a change in this situation during the next few years. Consequently, we must recognize that under our present circumstances, this is a factor that will hamper agrarian change permanently.

The problem of the technicalization of farming is related closely to the migration issue. As is known, the migration of people requires that human labor be substituted for by machine labor. The overly slow rate of the invasion of technology into farming, long-term stagnation in the number and area structure of farms and intensive migration have led to a situation where many farms have weakened for lack of manpower. At the same time, we cannot allow this situation to recur in the future. This demands that in the field of machinery, tractors and equipment, a consumer's market be created that will facilitate extensively all forms of the joint purchase and utilization of machinery as well as radical qualitative improvement in the field of services.

As for operations within farming itself, the most important task at present is to activate the supply of land. Older farmers without successors should be

provided with economic incentives to turn over their land. Despite an increase, farm pensions are too low and do not fulfill the legal requirement in relation to employe pensions (90 percent of the lowest employe pension).

A factor stimulating the supply of land would be a clearer differentiation in the amount of farm pensions than that stipulated in the law. Farmers that turn over their land to the PFZ should receive considerably higher pensions, since their situation (often they lack close family and a family economic base) generally is worse than that of persons that transfer land to heirs.

Activating the supply of land would require that every farmer, regardless of whether he has any successors, be given a free hand to dispose of his farm. The disposal of land in a private turnover should not deprive a farmer of his right to a pension (if only a minimum one) or to the return of his contributions, something not provided for in the current law. There are no grounds for assuming that private trade yields worse results than PFZ intervention for improving the structure, especially since the totality of land trade already is partly regulated (and will be regulated more and more effectively in the future, I expect) by economic mechanisms that require no administrative "correctives." In order to stimulate the supply of land, it would be possible, if only temporarily, to depart both from the minimum sale requirement and from the requirement that the value of a farm may not be lowered during the last 5 years before its transfer in the event that a farmer has decided to turn it over to the state. Experience shows that on many farms that have no heirs, disinvestment processes occur rapidly and it is difficult to determine how much the farmer himself is to blame for this. I think that liberalizing the regulations of the law in this way would be favorable from the viewpoint of society as a whole.

Another direction to move in order to bring about an increase in the land supply is in the direction of neglected farms. The current classification of farms for the neglected group (those lying fallow permanently) is too liberal and the regulations counteracting the neglect of land (at most an administrative penalty) are ineffectual.

Meanwhile, the phenomenon is growing and its social damage is on the rise. Both the rural self-government and local authorities should be more interested in neglected farms. In this way, aid could be given to some of them to start up again, while for others such solutions as the following could be proposed: a reduction in area, the sale (rental) of the entire farm, work for pay, moving closer to a plant or providing public assistance for the family.

The problem is complex but delicate because of the irregularities that were allowed in the past. Nonetheless, it is high time we began--without violating constitutional guarantees--to act more effectively to secure the interests of society, i.e., by utilizing land rationally. Incidentally, this too is a constitutional duty. Many premises point to the fact that the private land turnover will dominate, although it will not be the only form of land transfer for improving the agrarian structure. Consequently, we likewise must aim to activate it. It should be a completely free transaction (even without the current proviso on farms capable of goods production) and should be

implemented with maximum efficiency. It would be advisable to apply the financial preferences now given young farmers purchasing land from the state to those that purchase land in a private transaction as well.

In the future, when the land market stabilizes and the scale of land transactions grows, farmers should be relieved of the organizational-legal obligations related to conducting the intended transactions. Both in private trade and in state-private trade, this role could be played by an organization such as France's SAFER organization. Such an organization (institution) would be needed for another reason as well. While we envisage that all land transactions of farms would be regulated parametrically (both between sectors and within the compass of each sector), experience teaches us that the competition of the private farmer, even the best one, for land that the PGR, for example, is also trying to acquire, is quite problematical. However, if the interests of the farmer were represented by a specific organization, the chance that the transaction would be implemented in his favor would be considerably greater.

All instruments of economic policy should be harnessed to activate agrarian changes. Some for them, credit and taxation for example, already are creating and will create attractive terms for agrarian change. However, an income policy aimed at parity will have an especially important, even a decisive, impact. Only such a policy will be able to change the orientation of that part of the younger generation that is indispensable in farming and that will implement agrarian changes above all. In recent years, income policy has been too shaky; surely, this has been one of the reasons for the reduced demand for land.

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## CASE STUDY SHOWS IMPROVED STATE FARM PRODUCTIVITY

Warsaw NOWE ROLNICTWO in Polish No 9, Sep 85 pp 26-29

[Article by Zofia Wyszkowska: "Results of PGR Activity in the Bydgoszcz Province After Three Years of Operation of the New Economic-Financial System"]

[Excerpts] We began our analysis of the results of economic activity in 18 Bydgoszcz Province multiplant enterprises with the year 1978/1979, recognizing that that year was marked by conditions that were relatively representative of the period preceding the reform, and we ended it with the last fiscal year, the third year after the reform was ushered in.

## Conclusions

1. Production results and economic results during the last 3 years have shown a clear improvement. There are many reasons for this, above all the increase in the yields of grain, oleaginous crops, sugar beets and fodder crops. There was, however, a decline in potato yields. A greater adaptation of the sowing structure to soil-climatic conditions and fodder needs occurred. During the first 2 years of the reform's operation, there was a marked increase in the share of grains in the sowing structure and of leguminous crops for seed, and a reduction in the share of fodder crops for hay and green crops. In the last year, these trends were halted, and a reduction in grain cultivation in favor of fodder crops was even noted.

2. We noted an adjustment of the number of head of farm animals to local enterprise fodder potential as well as a reduction or even liquidation of those directions of animal production that are less profitable for an enterprise. As a result, there was a decline in the number of head of cattle and slaughter hogs, while the number of head of sheep rose. These changes caused a reduction in the amount of livestock. There was some improvement in per-unit productivity in animal production. The milk productivity of cows increased significantly; livestock production per unit of the average number of head of livestock also rose considerably. Nonetheless, the sale of livestock per hectare of UR still did not exceed the 1978/1979 level.

3. Changes in the structure of crop and animal production indicate the growing interest of management and workforces in rationalizing production outlays and profitability. Changes in the structure of crop production lead

us to assert that enterprises are attaching greater importance than they did formerly to land utilization. Changes in the structure of animal production substantiate the belief that it is more favorable for enterprises to make incomplete use of stations in livestock buildings, temporarily or totally eliminating some assets from utilization, than to conduct animal production at sometimes very high costs.

4. A combined assessment of Bydgoszcz Province PGR's shows definite trends in the structure of crop and animal production, in equipment, in the level of production (taken both quantitatively and qualitatively) and in the ultimate savings in economic terms. These trends are similar to the changes taking place throughout the state farm enterprise sector. However, an analysis of particular enterprises in all of the elements we studied shows very broad differentiation.

5. Enterprises with a similar production potential, i.e., those equipped in the same way with fixed assets and having similar soils, similar climatic conditions, a similar level of employment and remuneration and a similar number of livestock manifested very broad differentiation in production and economic results. Thus, it is very difficult to assess production potential. Frequently, of two neighboring enterprises, one will show very high-level production and financial results and the other will manifest very low-level results.

6. The human element is the most important factor in the differentiation of PGR results. The management cadre is aware of this fact. This is shown by polls conducted in this area. The actual results attained in subsequent years were very dependent upon the commitment of the entire workforce. They shaped up at the level of the overall "social climate" that prevailed among the crew.

7. The very unfavorable weather conditions in fiscal year 1980/1981 caused a sharp decline in production during that year; this had an unfavorable impact on production during the following years. The decline in production for this reason and because of changes in the structure of crop and livestock production, partly necessitated by the lack of potential for purchasing fodder outside enterprises, was very difficult make up.

Table 1. Changes in the Sowing Structure of the More Important Groups of Crops (in percentages)

Item	1978/79 r.	1979/80 r.	1980/81 r.	1981/82 r.	1982/83 r.	1983/84 r.
Grain crops	40,7	41,1	45,1	43,3	49,0	46,2
Colza	6,1	3,1	4,3	6,2	4,8	6,0
Legumes for seed	3,1	2,2	2,1	1,8	3,3	1,0
Total root crops	12,4	12,1	9,9	10,4	10,9	11,8
Including:						
--beets						
--potatoes						
Fodder for hay and green crops	6,0	5,5	4,1	4,7	5,0	4,9
	3,5	3,7	3,0	3,2	3,0	3,8
	35,6	31,9	36,9	37,2	30,9	34,5

Source: prepared by the author on the basis of report data.

Table 2. Changes in the Yields of Basic Crops (in tons/hectare) and Fertilization Levels

Item	1978/79 r.	1979/80 r.	1980/81 r.	1981/82 r.	1982/83 r.	1983/84 r.
Grains:						
--average	3,46	2,37	2,82	2,71	3,23	3,90
--maximum	4,44	3,75	4,49	3,33	3,95	4,61
--minimum	2,90	1,71	2,17	2,13	2,25	3,30
--difference	1,54	1,98	2,32	1,20	1,70	1,31
Colza:						
--average	2,17	0,94	1,39	1,94	1,81	2,32
--maximum	2,96	1,85	2,37	2,46	2,29	2,90
--minimum	1,40	0,41	0,79	1,70	0,90	1,75
--difference	1,56	1,44	1,58	0,76	1,39	1,15
Sugar beets:						
--average	27,54	25,88	16,51	28,42	21,36	31,02
--maximum	36,10	32,90	29,20	34,90	29,90	37,50
--minimum	20,30	19,20	8,00	23,70	14,20	26,10
--difference	15,80	13,70	21,20	11,20	15,70	11,40
Potatoes:						
--average	20,59	22,22	8,61	18,47	11,96	19,25
--maximum	27,7	31,50	24,90	27,40	17,00	28,10
--minimum	16,0	15,90	4,30	14,20	7,40	12,90
--difference	11,7	15,60	20,60	13,20	9,60	15,20
Fertilization in kg of NPK/hectare						
	319,7	319,4	287,7	251,0	274,0	293,0

Source: prepared by the author on the basis of report data.

Table 3. Changes in the Population and Stock of Livestock

Item	Cattle, Hog and Sheep Population According to the Annual Average per 100 Hectares of UR				
	1978/79 r.	1979/80 r.	1980/81 r.	1981/82 r.	1982/83 r.
Total cattle population	79,8	78,9	57,8	60,3	56,3
--number of cows	21,0	21,4	19,1	19,2	19,3
Total hog population	162,0	160,4	132,5	114,4	138,0
--number of sows	11,8	12,0	9,7	9,6	9,0
Total sheep population	32,0	31,2	27,3	30,5	37,6
--number of ewes	14,5	14,0	13,0	17,0	20,3
Number of livestock in SD	74,5	79,2	67,8	45,9	54,0
					50,1

Source: prepared by the author on the basis of report data.

Table 4. Changes in the Level of Animal Production From 1978/79 to 1983/84

Item	Milk production per cow per liter				
	1978/79 r.	1979/80 r.	1980/81 r.	1981/82 r.	1982/83 r.
Milk production per hectare of UR	3 373	3 381	2 974	3 057	3 336
Milk sales in 1/hectare of UR	692	704	601	576	639
Milk sales in kg/hectare	570	578	472	450	505
Total livestock sales in kg/hectare of UR	316	316	272	204	239
Cattle sales in kg/hectare	126	122	101	62	78
Slaughter hog sales in kg/hectare of UR	183	185	156	125	141
Calves raised from 100 cows (number)	85,2	81,9	86,8	85,6	90,3
Piglets raised from sows (number)	16,5	14,5	14,6	16,3	16,5
					17,9

Source: prepared by author.

Table 5. Changes in Employment and Gross Fixed Assets

Item	1978/79 r.	1979/80 r.	1980/81 r.	1981/82 r.	1982/83 r.	1983/84 r.
<u>Number of persons fully employed per 100 hectares of UR</u>						
--average	13,7	13,6	13,7	14,1	13,9	14,0
--maximum	18,7	18,2	17,7	17,3	16,9	17,0
--minimum	10,5	10,7	10,7	10,7	10,8	10,8
--difference	8,2	7,5	7,0	6,6	6,1	6,2
 Gross fixed assets per hectare of UR						
--average	92,4	101,9	105,8	114,1	123,8	438,2
--index	100,0	110,3	114,5	123,5	133,9	474,2
--maximum	133,9	142,6	146,8	153,1	169,7	568,6
--minimum	69,3	73,6	76,6	88,5	101,4	355,5
--difference	64,6	69,0	70,2	64,6	68,3	213,1
 Gross fixed assets per employee in thousands of zlotys						
--average	747,8	828,1	838,7	854,3	872,8	3 125,1
--index	100,0	110,7	112,2	114,2	116,7	417,9
--maximum	891,8	1 000,7	1 008,7	1 012,1	1 030,0	3 547,6
--minimum	541,1	645,0	636,0	671,1	767,0	2 798,7
--difference	350,7	355,7	372,7	341,0	263,0	748,9

Source: prepared by the author on the basis of report data.

Table 6. Changes in Net Terminal Production and in Financial Results

Item	1978/79 r.	1979/80 r.	1980/81 r.	1981/82 r.	1982/83 r.	1983/84 r.
<u>Financial result per employee</u>						
in thousands of zlotys						
--average	21,7	7,7	-55,5	105,3	111,3	133,0
--maximum	84,0	59,7	21,4	211,5	231,7	219,8
--minimum	-35,7	-62,8	-108,4	-1,0	29,7	41,8
--difference	119,7	122,5	129,8	210,5	202,0	178,0
<u>Financial result in thous. of zł/hectare of UR</u>						
--average	3,3	1,1	-8,0	15,0	15,4	18,6
--maximum	15,0	8,0	2,7	30,4	30,7	30,5
--minimum	-5,3	-10,9	-16,4	-0,1	4,0	5,5
--difference	20,3	18,9	19,1	30,5	26,7	25,0
<u>Net Terminal Production in thous. of złotys/hectare of UR</u>						
--average	16,75	16,03	14,03	45,5	62,17	72,9
--index	100,0	95,7	83,8	271,7	371,2	435,2
<u>Net terminal production per employee</u>						
in thousands of zlotys						
--average	140,6	137,5	120,6	330,9	444,5	519,6
--index	100,0	97,7	85,7	235,3	316,1	369,6
<u>Net terminal crop and livestock production in grain units per hectare of UR</u>						
--average	21,4	19,52	17,77	18,70	19,98	24,8
--index	100,0	91,2	83,0	87,3	93,4	116,8

Source: prepared by the author on the basis of report data.

28 March 1986

ECONOMY

INTERNATIONAL AFFAIRS

## CEMA COMPLEX-PROGRAM LACKS MATERIAL, TECHNOLOGICAL BASE

Hamburg DER SPIEGEL in German Vol 40 No 1/86, 30 Dec 85 pp 76-78

[Text] Moscow gets money and know how from its fraternal countries to execute its technological leap forward.

In the 1970's, the CPSU boasted that the "balance of power" had shifted toward socialism even in the economy. By now the comrades have come to understand that it was not so--nor is it any different at present.

"We are still substantially inferior to capitalism in the use of modern technology in production and, therefore, labor productivity," German veteran communist Juergen Kuczynski (81) admitted in a letter to national poet Hermann Kant, published just lately by the GDR periodical SINN UND FORM.

Kuczynski, a widely known student of social reality, followed the lead of his Council of State chairman Erich Honecker who, on the occasion of New Year 1985, acknowledged the "challenge" to the GDR "to maintain itself among the most advanced industrial countries." Honecker continued in the same vein last February: "The GDR cannot live by mediocrity."

The same holds true even more for the Soviet Union. In the leftist BLAETTERN FUER DEUTSCHE UND INTERNATIONALE POLITIK German reporter and arms critic Anton-Andreas Guha recalled having heard two section managers of the Gosplan, the central planning authority in Moscow, admit that "the productivity of our economy amounts to only 40 percent of the Americans".

This acknowledgement, Moscow visitor Guha noted, "describes a definite disaster." Because American productivity in turn only achieves 85 percent of Japan's--meaning that the USSR manages to achieve no more than a third of the top world standard. Indeed, it does even worse in important sectors: Electronics, computer technology and services.

Since Gosplan, lately under the direction of electronics specialist Nikolai Talyzin, now "frankly admits its difficulties" (Guba says), the boss of the CPSU is taking steps: Mikhail Gorbachev is calling on his allies for fraternal technological aid.

Shortly before Christmas, the premiers of the other nine member countries of the Eastern economic community "Council for Economic Mutual Aid" (CEMA) received a surprise summons to Moscow. The heads of government of even the far distant members--Cuba and Vietnam--obeyed the summons.

They signed a rapidly manufactured "complex program" that is to last through the turn of the millenium while also being incorporated in the national five-year plans beginning on 1 January 1986.

The intention is this: Joint laboratories and enterprises are to close the live gaps common to the planned economy of all CEMA countries: In the sectors electronics, automation, nuclear energy, new materials and processes, biotechnology.

Soviet Premier Nikolay Ryzhkov, former director general of the Uralmash arms corporation, announced to his colleagues "profound structural changes in the national economy." "Fundamentally new types of organizations" are to merge science and production in the entire Bloc: Multinational corporations and international programs, the first a firm to be called "Interrobot."

The East must become so ingenious, because, according to Ryzhkov, the West aims to engage it in a "technological war," "isolate it from modern technology, obstruct its economic development and damage the military-strategic equilibrium."

Ninety-two technological projects are to be realized, including:

- A super computer with 10 billion operations per second;
- Communication lasers and a new generation of satellites;
- Completely automated factories, robots for artificial vision;
- Controlled nuclear fusion as a new source of energy, "reliable" automated nuclear power plants, new methods for the final storage of radioactive waste and the "safe liquidation of nuclear power plants at the end of their life";
- Super hard substances by the use of pulse and explosion energy, ceramic motor vehicle engines'
- Gentechnologically produced drugs (interferon, insulin), bacterial fertilizers, fodder additives, biogas.

The revitalization of the Soviet economy is the principal objective of the complex-program: Labor and other costs are to be halved, the underdeveloped labor productivity quintupled.

The three non-European premiers at the round table were enthused." They will obtain the results of the planned leap forward "largely cost free."

The premiers of the developed countries some of them ahead even of the USSR were less happy, because they are meant to pay: The CEMA document notes that the program 2000 is to be financed by "moneys of the countries," loans by and funds of "the interested states."

Czechoslovakia's Lubomir Strugal immediately pinpointed the material weak point of the immense project: To translate scientific findings into production. He thought that "the necessary prerequisites" were still lacking in "the economy's management systems." Decoded this means that the first requirement is economic reform.

Bulgarian Grisha Filipov, raised in the USSR, courteously but aloofly expressed "gratitude for the gigantic effort of the Soviet side in the drafting of the program." Soviet Premier Ryzhkov had remarked that it had "not been an easy task."

GDR colleague Willi Stoph promised to "further deepen" cooperation--but subsequently spoke only of his GDR which is already making strenuous efforts toward highly integrated circuits and automated machine systems; its combines had always combined research, development and marketing; his country had been cooperating with the USSR for the longest time. After that he slyly recalled Gorbachev's Geneva proposals for "worldwide cooperation"--in other words with the West, too.

Ryzhkov evidently appreciated the undercurrents--and proceeded to appease the others: "We certainly do not intend to create a club of privileged nations," in other words not return to isolation.

Subsequently Gorbachev addressed the council of prime ministers, never before attended by a party chief: Socialism, after all, opposes "technological compartmentalization and hegemonism." "National tasks could be more rapidly and efficiently accomplished" by joint efforts: "Once we merge our forces, we will of course not renounce continuing international scientific exchanges."

On the other hand, "technological independence and immunity from pressure and blackmail" were imperative. It was vitally necessary "to totally demonstrate the superiority of socialism," and a "sharp turnaround" was overdue.

In summation, Gorbachev viewed the new technology program as "a great contribution to the consolidation of the unity and solidarity of the fraternal countries."

The background was topical in terms of international politics: Two days earlier, U.S. Secretary of State George Shultz had given a speech in West Berlin. According to Moscow's party organ PRAVDA, this speech "reeked of cold war" and represented an "attack on the sovereign right of the East European peoples who freely chose the road to socialism."

In fact Shultz had disputed just that: The East Europeans had never been able to exercise self-determination about their style of government and living, though the 1945 Yalta Agreement had promised self-determination. Before going

on to Romania, Hungary and Yugoslavia, Shultz affirmed "that we do not accept Eastern Europe's incorporation in the Soviet sphere of influence."

By means of the complex-program, Gorbachev has actually incorporated the East Europeans even more tightly, called even more on their potentials to serve the Soviet Union. The fraternal countries are supposed to exchange relevant data and set up "international engineering centers," "scientific-technological collectives and laboratories": Moscow wishes for a brain drain from Berlin, Prague and Budapest.

Gorbachev seems to have been motivated by the wish for sage heads from the USSR's outer ramparts at least a week before the premiers' summit: He proudly assured American businessmen that the theoretical foundations of rocket technology had been discovered and developed by a Russian, that the USSR had "laid the foundations of the conception of multistage rockets and constructed the first test rockets."

Moreover, almost none of the current metallurgical processes would have been possible without the achievements of Soviet scientists who also had often provided the crucial contribution to the theory of chain reactions as well as to the discovery of laser beams.

Nevertheless: The Soviet Union "of course" relied on "international as well as its own achievements in civilian and arms production."

Among some of the people affected, such as GDR science star Manfred von Ardenne, such projects arouse memories of the times of very different cooperation with the big brother: In 1945, the Soviets removed all-round genius Ardenne and his institute to the Soviet Sukhumi on the Black Sea in order for them to research isotope separation for the Kremlin's first atom bomb.

At the time, Ardenne agitated for the early return home of those forced to work in Sukhumi, who had been brought in from prisoner of war camps. He revealed his story in July last--while preparations for the new complex-program were being started in Moscow.

Ardenne went on to report the following: When a branch of the "Society for German-Soviet Friendship" was to be established in Sukhumi, the limits of his forbearance were breached. He wrote the Soviets a letter, saying that he was not in the mood to attend the celebration of such an establishment unless he were to have reliable news of the return home of his colleagues. Subsequently, he had received "urgent advice from higher up not ever to write another such letter."

However, he now has done just that. He published his reminiscences in a letter to the editor in Dresden's FAZ--as if to keep as much distance as possible between himself and the new cooperation: 500 scientists are engaged in applied research in electron, ion and nuclear physics, ultramicroscopy and medical electronics at Ardenne's GDR institute. It could contribute important work to the CEMA complex-program.

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

FRG ECONOMIST MAKES DETAILED ANALYSIS OF 5-YEAR PLAN 1981-1985

Bonn DAS PARLAMENT in German (supplement B 4/1986) 25 Jan 86 pp 3-15

[Article by Doris Cornelsen, Dr of Political Science, born 1933; since 1974 director for the section dealing with the GDR and East European Industrialized Nations at the (West Berlin) German Institute for Economic Research (DIW). Original title: "The GDR Economy 1981-1985; 5-Year Plan Financial Statement".]

[Text] I. Initial Situation and the "economic strategy for the 1980's"

The GDR economy recorded a relatively strong and stable growth in the 1970's. It achieved this, though the labor volume (employed persons x average working hours) had barely risen. The development of the two other primary production factors--fixed assets and materials use--made the difference. Investment activity had steadily increased in the course of these 10 years (albeit with some fluctuations); the same held true for materials consumption. Statistics reported with respect to the produced national income (both gross and net) show that the rise in materials consumption actually exceeded that of net output. The development of imports proceeded parallel to the growing materials consumption. The GDR is a highly industrialized country but poor in raw materials, compelled to import some 60 percent of the raw materials it needs.

In the early 1970's, rising imports did not yet present a problem. They were indeed largely paid for by exports. However, the situation changed decisively in the course of the decade. The first "oil price shock" occurred in 1973, initiating a substantial increase in world market prices for other raw materials, too. The rise in prices of finished goods lagged behind that of raw materials, with the result that the GDR's terms of trade (change in export prices relative to the change in import prices) deteriorated. This factor turned acute first in world trade, and after the changes in the price formation principles in the CEMA area (1975) applied also in trade with the Soviet Union, the GDR's biggest raw materials supplier.

Ever since, the GDR has no longer been able to pay its imports in full from export earnings and instead needed to finance part of its import costs by loans. It showed a deficit in trade with the West as early as 1970, with the Soviet Union from 1975. Net debts to the West increased by annual rates in

access of 20 percent in the second half of the 1970's; according to Soviet statistics, the trade deficit with the Soviet Union amounted to a total of 2.5 billion transferable rubles (TRbl) in 1975-1980.

In 1980, the Vienna Institute for International Economic Comparisons presented a study extrapolating this development. It indicated future accumulated current account deficits of tremendous dimensions. We may assume that the GDR planning authorities worked with similar projections. At any rate, in its report to the Eleventh SED CC Plenum in late 1979--at the beginning of the second oil price shock--the Politburo struck a positively dramatic note: "We are not merely confronting another exacerbation of already difficult circumstances. An entirely new situation has arisen."

As a consequence, the current account deficit needed to be reduced and surpluses earned in the foreseeable future. To achieve this, it was necessary to choke off the rise in imports and raise the growth of exports. Both these requirements reduced the resources available for output and consumption at home. No longer was it possible (as it had been in the 1970's) for economic growth to rely on materials use and fixed assets rising proportionally or even overproportionally. This meant new initiatives for future developments. "In view of the actual data, it is not merely a matter of projecting the rise in output in the same manner as before" (Erich Honecker).

Confronted with this situation, the GDR developed its "economic strategy for the 1980's." Erich Honecker explained its 10 points in the SED CC report to the Tenth Party Congress (April 1981). The report notes that the GDR needed to achieve large and stable economic growth in the 1980's, too. However, this should not involve growing capital equipment stocks and rising materials consumption but steady inputs by means of extensive and consistent "intensification": All opportunities available for improving the cost/profit ratio, rationalization and productivity growth should be utilized. The following were the main points of this economic strategy:

- The speed-up of scientific-technological advances;
- The reduction of specific production consumption;
- An investment policy geared more to modernization than new investments;
- The improvement of labor productivity.

The economic leadership did not expect this transition to "intensification" to happen on its own. The management and planning system was transformed by an abundance of legal changes.

The GDR Conference of Economists in autumn 1983 summed up the results of the measures adopted since the turn of the decade. In his major introductory report, Guenter Mittag (the Politburo member in charge of economic issues), listed as the outstanding factors the establishment of combines and the "further measures for the perfection of management, planning and economic accounting." The same emphasis was reiterated in many contributions to the

discussion. What makes this phraseology remarkable is the fact that the concept of "economic accounting" has been given parity with the terms "management and planning." Economic accounting in the socialist system combines accounting and checks on enterprise earnings with government planning and indirect controls. The emphasis now placed on it exemplifies the new role of cost/profit considerations.

## II. Economic System: Small Steps Toward Reform (1)

### 1. Organizational Change by the Establishment of Combines

The organization of GDR industry was decisively altered in 1979/1980. The three-stage structure--an intermediate management level, the Association of State Enterprises (VVB), was interposed between the individual state enterprises (VEB's) and the industry ministries--was abolished. Industrial enterprises were merged into large-scale combines in accordance with key output considerations and subordinated to the respective industry minister. Moreover, the combines were assigned important additional functions:

- Research enterprises, formerly mainly outside production enterprises, were incorporated in the combines. The expectation was for targets closer to practical needs and the rapid transfer of research results to production.
- Component suppliers were incorporated in the combines or set up within the combine framework. This measure was designed to remove the persistent bottleneck with regard to components.
- The foreign trade powers of the combines were extended to improve export results.

This combine reform had a major impact on foreign trade especially.(2) The strict organizational separation of industry from foreign trade was removed. The former rigid and centralist foreign trade organization, involving 30-35 foreign trade enterprises (AHB's) almost exclusively subordinated to the Ministry for Foreign Trade, was replaced by a more sophisticated marketing organization of 64 specialized AHB's. Twenty-three of these are to some extent integrated in combines, most of the others subordinated to the industry ministries. Twelve of them were split up into 61 foreign trade sectors (firms) and assigned to combines. Consequently new decisionmaking and consultative rights now exist at combine and enterprise level, accompanied by new responsibilities with regard to the fulfillment of foreign trade plans.

It was the objective of all this organizational reform to subordinate to a united management the entire production process in the combine, from research to production and sales. At the present time, GDR centrally managed industry counts

- 132 combines
- with 20-40 operating units each
- and an average of 25,000 employees per combine.

District managed industry also was organized in combines. It now has 93 combines with an average of just about 2,000 employees. According to the combine decree, the various operating units merged in combines remain legally independent and have their own financial resources. However, by comparison with the general director of the former VVB's, the combine general director has greater powers of intervention in the operations of the units. He decides plan targets, influences the allocation of earnings, carries out mergers and shifts of capacities and has the right of disposal of some central funds held by the combine management. The scope of action of combine directors is therefore relatively wide; the status of the individual operating units has been weakened.

## 2. Direct Control

Direct control is taken to mean central economic planning. Its results are directly mandatory targets for combines and operating units. Plan indices, norms and normatives as well as financial statements represent the scaffolding of direct control.

Plan indices are the central tool for the control of the output program and, at the same time, serve as checks on earnings. Currently some 90 indices are in force for annual planning (of centrally managed industry, including subheadings). Despite many years of debate on the issue of efficiency accounting, industrial goods production (gross production) dominated planning and reporting until the end of the 1970's, though its disadvantages--waste of materials, inflated cooperation--were undisputed. Since 1980, several "main indices of performance assessment" are emphasized in the total of all indices, as a controlling concept in combination with "other important qualitative indices." Industrial goods production was replaced as a main indication in 1983; however, it remains an important consideration in national planning.

Since the 1984 plan draft, the following are in force as "main indices": Net production, net profits, products and services to the general public, exports. The "other important qualitative indices" refer to labor productivity, costs (in particular costs of materials), quality and new developments. Net production is the indicator of the enterprise's performance (output less materials consumption and depreciation). In addition, net profits are defined as the "composite reflection of the efficiency of the entire reproduction process." They demonstrate the difference between costs (including wage costs) and earnings, arising only after the sale of the products. They may, therefore, be considered an indicator of demand appropriate production.

Normatives and norms are in effect for the planning and supervision of conservative materials consumption. The normatives of materials consumption are officially mandatory plan targets; they determine the upper limits for specific materials consumption. Norms of materials consumption are ascertained at enterprise level and represent the basis for the determination of the normatives. New regulations have now provided stringent instructions for the drafting, supervision and extent of mandatory force of confirmed norms and normatives.

In a market economy, coordination is established by direct contacts between the various economic units. In the planned economy such coordination is produced by a general economic system of balances. Proceeding alongside the fixing of plan targets is the incorporation of output and consumption within a system of commodity balances, the system of balances covering materials, equipment and consumer goods (MAK balances), with the aim of safeguarding the optimum satisfaction of national demand and rationing resources in short supply. At the time of balancing, mandatory decisions are issued on the production and sale by enterprises and combines in the coming plan period. New balance types were developed in the early 1980's, while the influence of the central authorities on balances was enhanced.

Many detailed regulations, referring--for example--to investments, science and technology and various economic sectors (in particular transportation), are also part of direct control in its new shape.

### 3. Indirect Controls

By indirect controls we understand a set of tools related to financial dimensions and, by way of granting or withdrawing benefits, inducing enterprises to maintain the officially desired behavior. In the phase of the New Economic System (NOeS), the GDR used the term "economic levers" to describe these tools. At the present time we more frequently hear the expression "material interestedness." Among the tools are costs, profits and utilization of profits, loans, prices and enterprise funds. Indirect controls assumed greater importance as a result of the priority assigned to the cost/profit ratio since the beginning of the 1980's.

The net profits of enterprises represent the starting point for the stimulating effect of indirect controls. A much simplified diagram shows its genesis:

- Receipts
- = Gross profit  
government income in 1984)
- = Net profit
- = Net profit of enterprises.

The net profit of enterprises provides money for, among other purposes, to the premium fund which is used to pay the year end bonuses and other premiums to employees. The enterprise and the employees are therefore greatly interested in achieving a satisfactory net profit.

By varying the components of net profits (such as raw materials prices, interest rates, gross profit margins, the rate of the production fund tax and the net profit levy), the authorities induce enterprises to rational materials consumption, the introduction of new products and plan appropriate behavior, because this is the only way for them to earn their net profits. This interrelation is now being exploited to a far greater extent:

- Already since 1976, prices payable by enterprises for raw materials and semifinished goods have been raised at regular intervals;
- The contribution to social funds, a kind of payroll tax amounting to 70 percent of the wage fund (payable by industry from 1984 on) is designed to encourage the rational use of manpower;
- Interest payable on loans (as a factor of costs) is subject to greater variations than hitherto;
- Profit surcharges are granted for new products, discounts required for obsolescent merchandise;
- Regulations relating to the production fund tax now provide for a kind of penal charge levied on, for example, the late completion of investment projects and excessive stocks;
- Instructions are more differentiated with regard to the ascertainment of the net profit of enterprises; they do, for example, obtain a larger share of "excess plan profits."

Overall we thus note a cautious revaluation of the role of profits. Admittedly, the enterprises' possibilities for using these profits remain very limited indeed.

#### 4. Supervision

As in any hierarchical organization, the central authorities in the GDR also must be able to check and appraise the performance of subordinated units. Checking plan conforming behavior is an essential aspect of the general system.

Supervisory mechanisms have been strengthened as a counterpoise to the combines' increase in powers as well as for the purpose of checking efficiency. New supervisory organs were set up and the competences of existing ones expanded. That applies specially to the supervisory and analytical function of the chief bookkeeper, the many inspections, quality controls and checks by the banking apparatus.

Annual reporting serves to review the full range of the "intensification strategy" and to combine the results of the checks by various organs.

As a result of the variation of the individual elements of organization, direct control, indirect control and supervision, a new quality in the economic mechanism was achieved by many small steps. The present methods of "management, planning and economic accounting" emphasize cost/profit considerations with the objective to replace the principle of maximalization by the principle of optimalization.

At the same time it will not do to overlook persisting weaknesses. The new mechanism of the "intensification model" is not able either to bring about the oft evoked identity of interests between production units and the national

economy as a whole ("whatever is useful for the national economy needs to be beneficial to combines and enterprises also"). Still, in general terms, the present economic mechanism is more appropriate for the settlement of outstanding problems and also more efficient than the system of the 1970's.

### III. Planning and Unexpected Problems

The 1981-1985 5-Year Plan, only enacted by the People's Chamber on 3 December 1981, at the end of the first year of its term, had the following chief provisions:

-- The speed-up of economic growth from an 4.1 percent average in 1976-1980 to a 5.1 percent annual average.

-- The reduction of the specific consumption of "nationally important" energy supplies, raw materials and other materials by 6.1 percent per annum. It is reported that these account for 58 products--mainly imported--with a 70 percent share in total materials use.

-- The call for structural changes was particularly insistent with regard to the entire concept of growth. To be developed were further processed products, of better quality and greater export profitability. Microelectronics and automation equipment were to transform the productive base of the entire national economy. At the same time, a second and very different structural change was envisioned: The return to domestic raw materials, specially to brown coal, in order to reduce dependence on imports.

-- The targets for foreign trade did not emerge directly from the published plan. In fact, its data on foreign trade were decidedly skimpy. Less than 5 percent of the published text dealt with it, and most of that was devoted to the significance of "socialist economic integration." However, the juxtaposition of growth rates shows that this 5-year plan looks for the consolidation of foreign trade: Output is to rise by at least 5 percent, domestic consumption (the total of investments and retail turnover) by only about 2 percent.

-- An important economic decision was adopted with regard to the use made of the commodities available at home. An average 2 percent annual reduction was envisaged with regard to investments, while retail turnover was to more or less continue on the lines of earlier development (+3.7 percent per annum). The domestic shortage, therefore, was to be absorbed mainly by investment activity rather than by the general public. In line with this interpretation, the connection between readiness to perform and the availability of supplies was frequently emphasized.

Unforeseen problems exacerbated the situation at the start of the 5-year plan period. A change occurred in the international financial situation. The supply of capital shrank, demand increased, interest rates rose. Following the de facto insolvency of Poland and Romania in 1981 and the abandonment of the "umbrella theory" (according to which the Soviet Union would come to the aid of any CEMA countries in payment difficulties), the GDR also saw its

opportunities for loans from Western banks dry up almost completely. At the end of 1981, the Soviet Union announced that it was going to cut by about 10 percent its oil deliveries fixed in long-term trade agreements. With respect to some essential sections the 5-year plan had therefore been overtaken by events even at the time of its enactment. The compelling need for consolidation of trade with the West was greater, the shortage of resources more oppressive. However, according to GDR planning regulations, a 5-year plan cannot be revised even when the situation changes completely. The necessary adjustments to prevailing circumstances are made by way of the annual plans.

This means--and it is important to remember this--that the success or failure of GDR economic development in the early 1980's cannot be judged entirely by the extent of the fulfillment or nonfulfillment of 5-year plan targets. Instead we must appraise the extent of GDR ability to cope with the problems arising.

#### IV. Objectives, Measures and Results

The new problems were first mentioned at the Third SED CC Plenum (20 November 1981): "...that we need to carry out the Tenth SED Congress economic directive with even fewer raw materials and other materials than assumed at the time (confronts) the management of economic processes with great challenges..." (Erich Honecker).

Since the the shortage of resources, adjustment and conversion difficulties have left noticeable traces. 1982 was particularly critical, because Western banks assumed an increasingly restrictive attitude. The GDR responded by a sometimes radical reduction of imports from the West, accompanied by simultaneous increases in exports. Supply gaps and bottlenecks at home resulted, and so did a decline in economic growth to less than 3 percent. However, the subsequent progress of the 5-year plan period was somewhat more favorable. Changes in production conditions and structural changes in various sectors were the specific features of the entire 5-year plan period.

##### 1. Energy Management

In view of the delivery contracts with the Soviet Union, the first wave of oil price increases on the world market (1973/1974) did not cause the GDR to adopt stricter energy conservation. After the second jump in oil prices (1979/1980), though, energy policy became almost the center of the new strategy. It focused on two targets:

- The reduction of specific energy consumption (5-year plan target: A steady energy volume through 1985);
- The expansion of the production and use of brown coal (output target for 1985 in the 5-year plan: 290 million tons).

These two targets actually collide. Brown coal has a relatively low energy output. By comparison with oil, its transportation and conversion require

greater energy use. Energy conservation is thus the harder to achieve, the greater the proportion of brown coal.

A central energy committee at the Council of Ministers was set up in 1979. A beginning was made in the same year with imposing a state indicator for energy consumption. In the following year, 1980, an energy decree was enacted, according to which the utilization of so-called incidental energy is a legal duty. Norms and normatives were set and reviewed. Since then an energy inspectorate of the central energy committee has been supervising the implementation of these decisions. Individual bonuses for conservation successes are awarded as well as penalties, fines and sanctions.

In addition, enterprise prices for energy were substantially raised. The first changes occurred as far back as 1976. According to a GDR source, the price level for the imported energy sources fuel oil and hard coal had been raised by about 50 percent by 1986 (in relation to 1979), for city gas and natural gas by about a third and for brown coal, electric energy and long-distance heat by 12 percent. The private consumer, on the other hand, did not have to suffer from higher energy prices. The GDR is the only CEMA country not to have changed prices and rates for the energy consumption of private households in the period under review.

Based on these many administrative measures, primary energy consumption was lowered in absolute terms in 1980-1983--despite a roughly 4 percent economic growth. Not until 1984 was there a definite rise in consumption. Admittedly, the successes recorded were in part due to the very inefficient energy use criticized in the GDR. In 1984, per capita primary energy consumption was still 216 PJ, 20 percent that in the Federal Republic, though the GDR achieves only about 75 percent of the West German performance with regard to the real national product.

The most significant savings were achieved in industry which uses about half the total of end energy (use energy). 1984 consumption here was not greater than in 1980. Other savings were registered in the transportation system. On the other hand, the energy consumption of private households is likely to have expanded sharply. This was a very different development from that recorded in the FRG, where the energy savings of recent years was due primarily to conservation in the private sector.

The share of brown coal has risen to a remarkable extent. The GDR produced just about 300 million tons brown coal in 1984, and brown coal has thus achieved 72 percent of the entire consumption of primary energy. GDR heating oil consumption, on the other hand, is said to have been lowered by 1984 to less than 20 percent of 1978 consumption.

## 2. Industry

Industry, the GDR's biggest economic sector, had ambitious plan targets for reducing specific consumption, changing structures and "further processing" in production. Conversion difficulties and the shortage of resources unfortunately exerted a particularly adverse effect. Instead of an annual 5.1

percent growth of industrial goods production (5-year plan), only just above 4 percent were actually achieved. This result was the upshot of many and very different trends.

Metallurgy is an excellent example of positive and negative effects arising from the intensification strategy. The investments in ferrous metallurgy to raise the proportion of refined products had a definitely positive effect. The converter steel plant in Eisenhuettenstadt, the substantial investments in Unterwellborn and the new rolling mills considerably increased and improved capacities, at least from 1984/1985 on. On the other hand, ferrous metallurgy largely depends on imports, on ore and hard coal coke, on crude iron for use in the steelworks. Shortages therefore limit the growth potential here also.

The chemical industry, too, benefited from further processing investments. Well on the plus side is the oil industry with its two combines, Schwedt and Leuna. The operating area doubled in Schwedt during the 5-year plan period, and so did the value of fixed assets. The output of motor fuel and petrochemicals rose sharply. The GDR's dependence on imports of these materials has diminished considerably; petrochemical specialties are even exported. The remaining chemical industry, though, was very badly affected by the shortage of heating fuel and natural gas. The use of domestic energy sources and raw materials tends to raise costs, and the admixture of domestic raw materials tended to cause noticeable quality problems.

Machine construction still had large reserves for conservation or development at the beginning of the 1980's. The machines were too heavy, the potential for technical progress great. Targets were therefore ambitious, both for the reduction of specific consumption and for average annual growth. It is impossible to pronounce generalities about the course of the last 5 years for this sector which involves 24 industries with almost 1 million employees. Some industries are well able by their own efforts to compensate the shortage of investments--by the "own construction of rationalization aids"--(for example machine tool construction), others suffer a decline in capacity (for example the completely obsolete foundry industry). The shortage of materials obstructs growth in some industries, in others the benefits of the better quality of steel--technically facilitating the reduction of volume--outweigh the disadvantages. In the course of the 5-year plan period much encouragement was given promising export productions rather than purely domestic commodities. The continuing delays in the introduction of modern equipment still make for problems.

Shortages of materials adversely affected the classic electrical engineering industries such as cable production, electric machine construction, light bulb and lamp manufacture as well as the output of household appliances. According to the plan, allocations of steel, castings and copper were to be only slightly larger or to even stay the same, so that some production targets were simply impossible to achieve. Microelectronics, on the other hand, is increasingly important. At the beginning of the 1980's, more than a third of investments in the sphere of the Ministry for Electrical Engineering and Electronics were allocated to these production enterprises. It is reported that more enterprises are to be established in this sector. The labor force

employed in microelectronics in its widest sense was reported to be 100,000 at the beginning of the 1980's; by now it is said to have risen to 150,000. Though both the range and volume is probably fairly small by international standards, production has definitely been much expanded. On the other hand, the use of this new technology seems still to present problems.

The glass and ceramics industry is based on domestic raw materials and, so far, has not suffered any serious restrictions with regard to energy consumption. Growth has been substantial. A major investment project--the floating glass plant in Torgau--has opened up new output and sales possibilities. Light industry (leather, textiles, clothing), on the other hand, has dropped back as a result of the new conception. The need for conservation with regard to materials use did not in this industry result in genuine savings but tended to bring about a worsening of quality. Despite its importance for the export trade, growth rates are low.

In general, therefore, the 5-year plan period featured attempts to reduce materials consumption (unduly high by international standards) as well as slowing growth and loss of quality. New and efficient plant in some sectors were counterbalanced by the obsolescence of equipment stocks in other sections of industry. The recourse to domestic raw materials must evidently be considered entirely negative, because it has worsened efficiency and added to pollution.

### 3. Agriculture

Agriculture, too, has been included in the general economic targets. The 5-year plan provided for the following:

-- A rise in yields of crop production, in particular with regard to cereal grains. Grain imports are to be gradually reduced and finally rendered superfluous by the increase in domestic yields.

-- The improvement of the cost/profit ratio was another key consideration.

The discussion of farming came to the fore in the late 1970's and received detailed attention at the Third SED CC Plenum in November 1981: Farm production costs are too high, cost/profit considerations must be much more emphasized and output increased.

The following were the most important measures adopted:

-- Price reform. Prices per product unit for crop and livestock products were raised. Abolished on the other hand were the former subsidies in the ancillary services sector (fuel, farm equipment, feedstuffs, building materials and construction services). More realistic cost ratios were to primarily encourage the more careful handling of ancillary services and, at the same time, provide an incentive for the greater output of farm produce.

-- Moreover, organizational changes were designed to raise the efficiency of farming. New organizational forms are on the one hand the regional production

organization (the establishment of sub units of crop cultivation enterprises) and, on the other, the cooperation councils (bodies to coordinate enterprises of crop cultivation and livestock production).

The results achieved by agriculture in the past 5-year plan period are very respectable indeed. Four record grain harvests were recorded, two record harvests for overall crop production and generally good performances in livestock production. However, it will still take a good deal to achieve independence of grain imports: Three million tons grain were imported each year in the average of 1971-1984 (3.5 million tons in the average of 1976-1980).

#### 4. Transportation

The transportation system was called upon to accomplish all transport services at the lowest economic cost. The following targets were spelled out:

- The reduction of specific transportation needs;
- The increase in the share of the energy advantageous railroad and inland shipping services, cuts in long distance works transport services;
- The electrified railroad network was to be extended at the same time, so as to shift from diesel engines to electric locomotives as much as possible.

At the end of 1981, a new freight transportation decree was enacted, which lists the most important principles for the reduction of transport costs, in particular the optimization of transport and delivery terms, the setting of plan indices for the use of freight services, the use of transportation normatives. Standards for transport services have by now been settled.

New domestic freight rates took effect in 1982. Rates rose by an average of 60 percent, and road freight rates increased above the average. Fuel rationing was even stricter from 1982 on. Penalties, long distance surcharges and a works transportation levy all aim in the same direction.

The GDR has long had speed limits. The speed limit on the motorways is 100 km/hour. Top speeds on country roads were reduced from 90 km/hour to 80km/hour in 1979. In 1984, limits were set for commercial vehicles, depending on the type of vehicle.

Transportation costs have definitely dropped as the result of all this. The freight volume declined by 13 percent through 1984, freight services by 8 percent. The reasons mentioned are improved delivery terms and the more rational use of vehicles as well as changes in trading and warehousing networks. At the same time we cannot exclude a partial shift to intra-works traffic which is not reflected in the statistics.

The railroad's share in freight services rose from 67 percent in 1980 to 73 percent in 1984. At the same time the network of electrified sections was

extended from 1,700 km to 2,320 km. The 5-year plan target aimed at the electrification of 750 km railroad sections. It was far exceeded.

## 5. Investments

A "change in tendency" was announced for investments. Expansion investments were to be the exception, and the main emphasis was on the improvement of the efficiency of existing plant by modernization and reconstruction. This restrictive investment policy was enforced by strict checks "project by project"; the State Central Inspectorate of Investments acted as the controlling body.

In fact this strict control has worked with respect to investments. Total investment activity has declined since 1981, and investments in industry have stagnated. Within industry as a whole, the share of metallurgy has increased. However, it is likely that an investment thaw of considerable proportions has already emerged in many sectors.

"Own construction of rationalization aids" was promoted in the entire 5-year plan period: Enterprises are supposed to themselves manufacture some of their specific equipment. This "own construction" is also included in the plan, though the enterprises have at least some elbow room. In many cases entire workshops were set up, which offer their specialties to other enterprises, too. In 1980, around 9 percent of equipment investments in industry were generated by own production. The 5-year plan target envisaged doubling "own construction," and this target was in fact met in 1984. The efficiency of this type of investment depends on the enterprise production profile. We may assume that in many cases "own construction" is no more than an emergency expedient.

## 6. Private Consumption

Contrary to the 5-year plan targets, no success was achieved in the attempt to keep supplies for the general public from being affected by the general shortage and indeed steadily increase them. The rise in retail turnover gradually declined until 1983, the turnover of industrial commodities in fact dropped slightly in 1982 and 1983. Gaps and supply bottlenecks multiplied in 1982, even with regard to food. The earlier customary increase was not achieved again until 1984.

Retail turnover is a nominal dimension; the amount of price rises included therein is not known. According to the GDR's official price policy, prices of essential commodities have been kept steady for years. Prices of higher quality goods, on the other hand, are to be adjusted to rising costs and produce taxes as well as profits. Since this new orientation of pricing was proclaimed in 1979, the GDR Statistical Yearbook has been recording price increases for leather goods, textiles, clothing and other industrial commodities. Actual price increases due to the introduction of new and more expensive products as well as shifts in assortments are bound to exceed statistically registered price rises. In real terms, the situation of

consumers worsened until 1983. Ultimately, therefore, the general public was made after all to assume a great deal of the burden of consolidation.

The steady prices for essential commodities required substantial subsidies in the period under review. Due to the growing subsidies for consumer prices, budget spending "from social funds" (price subsidies, moneys for housing, health, social programs, education, and so on) rose to M340 billion in the entire plan period, while the 5-year plan had provided for only M295 billion.

## 7. Foreign Trade

The consolidation of foreign trade, the object of all these efforts, was accomplished surprisingly fast in the 5-year plan period.

In trade with the West, the GDR succeeded in 1981 already to lower the deficit. Since 1982, it has recorded a surplus. Interest was paid punctually and loans repaid when due. Insofar as shown in the statistics (BIS [Bank for International Settlements] and OECD plus accumulated balances in inner-German trade), net debts were substantially reduced. By mid-1985 they amounted to U.S.\$6.3 billion, just about half of the debts at the end of 1980 (\$11.3 billion). The drop in net debts is attributable less to the repayment of the total amount of loans than to the accumulation of credit balances. These amounted to \$5.3 billion in mid-1985. If we pursue GDR interpretations--"liquidity before profitability" -- this is the response to the exceptionally precarious liquidity situation at the beginning of the 1980's.

Western banks once again consider the GDR a reliable borrower. The planned amounts of major financial loans in the past 2 years were almost always exceeded as the result of the banks' great interest (1984: a total of \$0.9 billion, 1985: a total of \$1.1 billion). In addition to the punctual payments made by the GDR, the financial credit surprisingly extended in mid-1983 by several West German banks in the amount of DM1 billion, accompanied by a FRG Government guarantee, may well have contributed to this latter about turn in the Western banks' assessment.

Considerable differences occurred in the development of trade with the West. These differences arose in the evolution of inner-German trade on the one hand and trade with other western countries on the other. The GDR was compelled to consolidation especially with regard to its large debts and the restrictive policies of western banks in non-German western trade. The GDR strained all its forces to substantially reduce imports and raise exports in 1982. It was in a better position regarding its debts to the FRG. The total debt was lower and the ratio of debts to deliveries much more favorable. Moreover, the GDR had recorded a surplus in inner-German trade ever since 1980. It was therefore able to procure the most urgently needed Western imports in inner-German trade and thereby keep within manageable proportions the negative consequences of its restrictive import policy vis-a-vis the Western countries as a whole.

However, these export successes in trade with the West were achieved less by the traditional export industries (investment goods industries, consumer goods

industries) than in the sector of basic materials. Oil products accounted for a large proportion of the export increases; even after declining in 1984, they still account for 25 percent of all exports to the West. Moreover, in order to cope with its liquidity bottlenecks, the GDR seems to have sold not only oil products but also crude oil.

According to Soviet statistics, the GDR showed a trade deficit with the Soviet Union until 1984. Consolidation and the repayment of the obligations incurred since 1975 has as yet to be achieved in this case.

#### V. Summary and Outlook

In general terms, positive aspects predominated in the past 5 years. At roughly 4 percent, overall annual economic growth was definitely respectable. The excessive specific consumption of materials and energy was reduced, foreign trade problems eased. However, the emphasis on foreign trade involved losses of growth. These losses were felt directly in the deterioration of the supply situation. In the longer term, we must expect the restrictive investment policy to produce further after effects.

The structural change toward domestic raw material sources was accompanied by inherent problems. The use of brown coal, for example, involves considerable environmental damage. The further processing of production has so far been limited to the basic materials industries--chemicals and metallurgy. The promised modernization of electrical engineering and machine construction is still to happen, and so are quality improvements in the consumer goods industries.

Basic conditions for future growth are likely to have improved. This, though, does not mean that the policy of intensification will be abandoned, because shortages will continue to dominate economic development. In trade with the West, import possibilities will depend on the GDR's own export potential. This certainly presages greater future problems. The shifts in the structure of exports toward oil products, completed in past years, are hardly likely to be efficient in the long run. They should indeed be replaced by traditional export commodities. That in turn implies the necessity to modernize industry all along the line and to improve the export offer. However, this will certainly be possible only gradually, so that exports and, consequently, imports are unlikely to grow to any considerable extent. Another increase in net debts in the next 5-year plan period is not to be expected.

In trade with the Soviet Union, the protocol on plan coordination stipulates a real increase in turnover by 3 percent. This moderate rise does not imply any increasing orientation to the East of GDR foreign trade. Compared with 1984 results, the raw materials deliveries agreed are steady or just minimally greater. The entire outlook for foreign trade may therefore be interpreted as the continued pursuit of the austerity policy.

Following the years of austerity with regard to investments, it would evidently be necessary in the next 5-year plan to expand and renew fixed assets by a large-scale investment program. It is very doubtful, though,

whether an above proportional investment activity will in fact happen. The improvement of the general standard of living obviously has a high priority among domestic targets. The expansion and qualitative improvement of commodities available as well as the completion of the housing construction program by 1990 will preempt the major portion of capacities. Not much scope, therefore, appears available for an expansive investment policy.

If this assessment is correct, the next 5-year plan will be a plan for the stabilization of achievements rather than a program of changes.

Table 1: Indices on GDR Economic Development (percentage growth by comparison with the previous year)

	(1)	1976/ 1980 <sup>1)</sup>	1981/ 1985 <sup>1)</sup>	1981	1982	1983	1984 <sup>2)</sup>	1985
		Ist	(2) Plan	(1) Ist			(2) Plan	
(3)	Produziertes Nationaleinkommen	4,1	5,1	4,8	2,6	4,4	5,5	4,4
(4)	<i>Primärenergieverbrauch in der Volkswirtschaft</i>	.	0,3	-1,8	-0,1	2,7	.	.
(5)	Rohbraunkohle	0,8	.	3,5	2,9	1,6	3,5	.
(6)	<i>Industrie</i>	4,7 <sup>3)</sup>	5,1	5,5 <sup>3)</sup>	3,6 <sup>3)</sup>	3,9 <sup>3)</sup>	4,3 <sup>3)</sup>	3,8
(7)	Warenproduktion im Bereich der Industrieministerien	5,5	5,5	5,9	4,3	4,6	4,5	4,3
(8)	Warenproduktion	.	.	7,0 <sup>4)</sup>	5,6 <sup>4)</sup>	7,1 <sup>4)</sup>	8,3 <sup>4)</sup>	8,0
(9)	Nettoproduktion	.	.	.	.	.	.	.
(10)	Arbeitsproduktivität (Basis Warenprod.)	4,6 <sup>5)</sup>	5,2 <sup>6)</sup>	5,0	2,6	4,1	3,4	.
(11)	<i>Bauwirtschaft</i>	3,3 <sup>4)</sup>	3,4	4,0 <sup>4)</sup>	2,9 <sup>4)</sup>	3,1 <sup>4)</sup>	2,3 <sup>4)</sup>	3,4 <sup>4)</sup>
(12)	Bauproduktion der Volkswirtschaft	162,6	188,0	185,4	187,1	197,2	207,0	203,1
(13)	Fertiggestellte Wohnungen	111,9	120,0	125,7	122,4	122,6	121,7	117,6
(14)	davon:	50,7	68,0	59,6	64,6	74,6	85,4	85,6
(15)	Neubau	.	.	.	.	.	.	.
(16)	Modernisierung	.	.	.	.	.	.	.
(17)	<i>Landwirtschaft</i>	1,4 <sup>8)</sup>	1,5 <sup>9)</sup>	-7,9	13,1	0,5	12,7	.
(18)	Getreideernte	0,5 <sup>8)</sup>	.	0,6	-2,1	3,0	1,2	.
(19)	Viehbestand, insgesamt <sup>10)</sup>	3,8 <sup>8)</sup>	0,9 <sup>9)</sup>	2,8	-6,6	2,7	6,7	0,6 <sup>12)</sup>
(20)	<i>Binnenverkehr</i> <sup>13)</sup>	5,1	.	-3,2	-7,3	-2,2	-1,1	.
(21)	Gütertransportmenge	1,4	.	1,2	2,3	1,0	3,6	.
(22)	Eisenbahn	1,2	.	1,9	1,2	3,8	7,0	.
(23)	Binnenschifffahrt	6,7	.	-5,1	-12,3	-3,9	-4,0	.
(24)	Straßenverkehr	3,4	.	-2,1	-6,7	-0,3	1,4	.
(25)	Gütertransportleistung	2,5	.	-1,1	-3,1	1,6	3,2	2,9
(26)	Eisenbahn	-3,8	.	9,3	-2,9	5,9	9,0	8,7
(27)	Binnenschifffahrt	6,9	.	-5,2	-18,5	-5,3	-5,8	.
(28)	Straßenverkehr	4,1	3,7	2,5	1,0	0,7	4,2	4,0
(29)	<i>Einzelhandel, Umsatz</i> <sup>14),15)</sup>	3,4	3,7	2,9	2,1	1,6	3,3	.
(30)	davon:	4,8	3,7	2,1	-0,1	-0,1	5,1	.
(31)	Nahrungs- und Genussmittel	10,3 <sup>16)</sup>	.	10,7	9,2	10,6	8,4	8,0
(32)	Industriewaren	10,3 <sup>16)</sup>	.	15,4	14,1	12,0	7,3	.
(33)	<i>Außenhandel, Umsatz</i> <sup>14),15)</sup>	.	.	-1,1	+5,4	+8,0	+6,9	.
(34)	davon:	10,3 <sup>16)</sup>	.	6,4	4,3	9,0	9,6	.
(35)	Einfuhr	10,3 <sup>16)</sup>	.	15,4	14,1	12,0	7,3	.
(36)	Ausfuhr	.	.	-1,1	+5,4	+8,0	+6,9	.
(37)	Saldo (in Mrd. Valuta-Mark)	3,7	3,7	3,1	2,7	2,2	3,9	4,0
(38)	<i>Nettогeldeinnahmen der Bevölkerung</i>	4,6 <sup>16)</sup>	-2,1 <sup>18)</sup>	2,7	-6,4	-0,0	-4,9	0 <sup>19)</sup>

Key:

- |   |  |
|---|--|
| 1. Actual figures   | 18. Total livestock held               |
| 2. Plan   | 19. Market production of livestock     |
| 3. Produced national income                                     | 20. Inland transportation              |
| 4. Primary energy consumption in<br>the national economy        | 21. Freight transportation volume      |
| 5. Raw brown coal   | 22. Railroad                           |
| 6. Industry   | 23. Inland shipping                    |
| 7. Goods production in the sphere<br>of the industry ministries | 24. Road transportation                |
| 8. Goods production   | 25. Freight transportation performance |
| 9. Net production   | 26. Retail trade, turnover--including  |
| 10. Labor productivity (based on<br>goods production)           | 27. Essential and nonessential foods   |
| 11. Construction  | 28. Industrial commodities             |
| 12. National construction output                                | 29. Foreign trade, turnover--including |
| 13. Completed units ) in  | 30. Imports                            |
| 14. inc. New construction ) 1,000                               | 31. Exports                            |
| 15. Modernization ) units                                       | 32. Balance (in billion valuta marks)  |
| 16. Agriculture   | 33. Net cash incomes of the population |
| 17. Grain harvest   | 34. Total investments                  |

Footnotes: 1) 5-year average.--2) Preliminary figures, some estimated.--3) Calculated from monthly data; actual figures, i.e. inclusive of official data, adjusted by working day.--4) Calculated from index data.--5) Gross output per employed person.--6) Basis: goods production.--7) In the sphere of the Ministry for Construction.--8) Average annual growth rate based on the averages for 1976-1980 by comparison with the averages for 1971-1975.--9) Average annual growth rates based on the averages of 1976-1980 with reference to the planned volume for 1985.--10) On the basis of the GDR's large cattle formula; final annual values.--11) Total of the state yield of slaughter cattle, milk, eggs and wool; value attached in grain units (GE) as per the GDR's grain formula.--12) Planning in terms of quantity.--13) Excluding marine shipping and civil aviation.--14) Prevailing prices.--15) Including inner-German trade.--16) Ascertained by means of all annual values.--17) Excluding major overhauls, at 1980 prices.--18) Taking into account a total planned volume of M256 billion.--19) Converted into constant prices, the planned investment volume of M56 billion probably barely manages to stay the same as the previous year's volume.

Sources: GDR Statistical Yearbooks; Statistical Indicators of Short Term Economic Changes in ECE Countries, Geneva; economic plans (lately: GB1 DER DDR, Part I/1984, No 32); plan fulfillment reports (lately: NEUES DEUTSCHLAND, 19/20 January 1985, pp 3ff); calculations and estimates by the German Institute for Economic Research, Berlin.

Table 2--Selected Data on the Development of Incomes and Consumption

	(2) Plan 1981/85						(1) Durch- schnitt- licher jährlicher Zuwachs in vH	
		1980	1981	1982	1983 <sup>2)</sup>	1984 <sup>3)</sup>		
		(3) Zunahme in vH	(4) in Mrd. Mark				(5) 1984 gegenüber 1980	
(6)	Nettogeldéinnahmen der Bevölkerung <sup>1)</sup>	3,7	120,9	124,7	128,2	131,1	136,2	3,0
(7)	davon:							
(8)	Nettolöhne und -gehälter (je Arbeitnehmer in Mark)	.	75,0	77,8	80,3	82,7	86,0	3,5
(9)	Renten <sup>2)</sup>	.	(9 020)	(9 310)	(9 550)	(9 780)	(10 130)	(2,9)
	Sonstige Einnahmen <sup>1)</sup>	.	15,8	15,7	15,6	15,5	15,5	-0,5
		.	30,1	31,2	32,3	32,9	34,7	3,6
(10)	Spardepotzuwachs gegenüber dem Vorjahr		2,8	3,2	4,6	5,6	5,5	
(11)	Einzelhandelsumsatz, insgesamt	3,7	100,0	102,5	103,5	104,3	108,7	2,1

<sup>1)</sup> Einschließlich Beiträge zur freiwilligen Zusatzrentenversicherung. — <sup>2)</sup> Renten der Sozialversicherung und aus dem Staatshaushalt. — <sup>3)</sup> Vorläufig.

Quellen: Statistisches Taschenbuch der DDR 1985 sowie Schätzungen und Berechnungen des Deutschen Instituts für Wirtschaftsforschung, Berlin.

Key:

- |                                       |   |
|---------------------------------------|---|
| 1. Percentage average annual growth   | 7. (per employee, in marks)   |
| 2. Plan                               | 8. Pensions   |
| 3. In billion marks                   | 9. Other income   |
| 4. 1984 compared with 1980            | 10. Growth of savings deposits by comparison with the previous year |
| 5. Net cash incomes of the population |   |
| 6. Net wages and salaries             | 11. Total retail turnover   |

Footnotes: 1) Including contributions to voluntary supplementary insurance.--  
2) Pensions paid by social insurance and the national budget.--3) Preliminary.

Sources: "Statistisches Taschenbuch der DDR 1985" [1985 GDR Statistical Manual] as well as estimates and calculations by the German Institute for Economic Research, Berlin.

Table 3--GDR Foreign Trade by Groups of Countries

	1971— 1975 <sup>2)</sup>	1976— 1980 <sup>2)</sup>	1980	1981	1982	1983	1984	
	(1) in Mrd. VM <sup>3)</sup>							
(2)	Einfuhr, insgesamt	28,79	53,18	62,97	67,00	69,88	76,20	83,50
(3)	Sozialistische Länder <sup>4)</sup>	18,71	35,00	40,09	44,91	47,85	50,64	55,62
(4)	RGW-Länder <sup>5)</sup>	17,88	33,42	37,92	42,88	45,79	48,92	53,60
(5)	UdSSR	9,77	18,61	22,25	25,81	28,58	30,87	33,82
(6)	Westliche Industrieländer <sup>6)</sup>	8,91	15,45	19,19	19,51	18,55	22,37	25,04
(7)	Entwicklungsländer	1,17	2,73	3,69	2,58	3,48	3,18	2,84
(2)	Ausfuhr, insgesamt	27,39	47,42	57,13	65,93	75,23	84,23	90,40
(3)	Sozialistische Länder <sup>4)</sup>	19,92	34,33	39,72	43,64	47,98	53,98	58,67
(4)	RGW-Länder <sup>5)</sup>	18,87	32,65	37,38	41,47	45,71	51,37	55,92
(5)	UdSSR	10,01	16,80	20,36	24,08	26,58	29,95	33,29
(6)	Westliche Industrieländer <sup>6)</sup>	6,35	10,40	13,77	18,33	22,30	24,78	26,33
(6)	Entwicklungsländer	1,12	2,69	3,64	3,96	4,95	5,46	5,40
(9)	Insgesamt	(8) Salden der DDR <sup>7)</sup>						
(3)	Sozialistische Länder <sup>4)</sup>	-7,00	-28,80	-5,84	-1,07	5,35	8,03	6,90
(4)	RGW-Länder <sup>5)</sup>	-6,06	-3,34	-0,37	-1,27	0,13	3,34	3,05
(5)	UdSSR	4,94	-3,83	-0,54	-1,41	-0,08	2,45	2,32
(6)	Westliche Industrieländer <sup>6)</sup>	1,22	-9,06	-1,89	-1,73	-2,00	-0,92	-0,53
(6)	Entwicklungsländer	-12,84	-25,27	-5,42	-1,18	3,75	2,41	1,29
		-0,21	-0,21	-0,05	1,38	1,47	2,28	2,56

**Key:**

- |                                 |                         |
|---------------------------------|-------------------------|
| 1. in billion Valuta marks      | 6. Developing countries |
| 2. Total imports                | 7. Total exports        |
| 3. Socialist countries          | 8. GDR balances         |
| 4. CEMA countries               | 9. Total                |
| 5. Western industrial countries |                         |

Footnotes: 1) At prevailing prices; value date fob; purchaser or seller country.--2) 5-year average.--3) Valuta mark--statistical unit of calculation for purposes of the breakdown of GDR foreign trade; conversion rate: 4.67 Valuta marks equal 1 transferable ruble; the conversion rate with Western currencies fluctuated with the parity changes between the ruble and convertible currencies; in effect for 1984 was 1 valuta mark for DM0.742; differences in the totals are due to rounding off of figures.--4) CEMA countries and other socialist countries, specially the People's Republic of China, Yugoslavia, North Korea and Laos.--5) Albania, Bulgaria, CSSR, Cuba, Mongolia, Poland, Romania, USSR, Hungary and, since 1978, Vietnam (included among the socialist countries until 1977).--6) All so-called capitalist industrial countries, in other words OECD countries.--7) "1971-1975" and "1976-1980"; totals of the individual years.

Note: The methodological notes of the GDR Statistical Yearbook have omitted the detailed listing of countries and groups of countries since 1980.

Sources: 1985 GDR Statistical Manual; GDR Statistical Yearbooks; foreign trade yearbooks for CEMA and the various CEMA countries; OECD partner country data; calculations by the German Institute for Economic Research, Berlin.

Table 4--Data on GDR Debts to the West

	1977	1978	1979	1980	1981	1982	1983	1984
(1) in Mrd. US-Dollar								
(2) Schuldenstand der DDR <sup>1)</sup>								
(3) Bankkredite (BIZ/OECD)	5,28	6,79	8,55	9,93	10,73	9,11	8,60	8,54
(4) Öffentliche und öffentlich garantierte Handelskredite (BIZ/OECD)	1,00	1,20	1,30	1,40	1,50	1,62	1,95	1,71
(5) Verpflichtungen aus dem innerdeutschen Handel <sup>2)</sup>	1,28	1,84	2,13	2,13	1,61	1,57	1,61	1,09
(6) Bruttoverschuldung	7,56	9,83	11,98	13,46	13,84	12,30	12,16	11,34
(7) Guthaben (BIZ)	-0,90	-1,32	-1,96	-2,15	-2,18	-1,99	-3,35	-4,54
(8) Nettoverschuldung	6,66	8,51	10,02	11,31	11,66	10,31	8,81	6,80
(9) Zinszahlungen <sup>3)</sup>								
(10) Export der DDR <sup>4)</sup>	0,36	0,51	0,82	1,21	1,58	1,11	0,74	0,60
(11) Relationen	2,50	2,86	3,57	4,53	5,44	6,58	7,16	7,00
(8) Nettoverschuldung								
(12) — je Einwohner in US-Dollar	397	508	598	676	697	617	528	408
(13) — in vH des Exportes	266	298	281	250	214	157	123	97
(9) Zinszahlungen								
(13) in vH der Exporte	14	18	23	27	29	17	10	9

Key:

- 1. in billion U.S.dollars
- 2. GDR debt status
- 3. Bank loans (BIS/OECD)
- 4. Official and officially guaranteed trade credits (BIS/OECD)
- 5. Obligations arising from inner-German trade
- 6. Gross debts
- 7. Credit balances (BIS)
- 8. Net debts
- 9. Interest payments
- 10. GDR exports
- 11. Ratios
- 12. per capita, in U.S.dollars
- 13. as percentages of exports

Footnotes: 1) As far as statistically shown. At the end of the respective period under review.--2) Accumulated debit balance of the GDR, converted to U.S.dollars.--3) Estimated from net debts (excluding swing). The following average rates were used for interest amounts (see ECE annual reports): 1977:

5.6 percent, 1978: 6.2 percent, 1979: 8.5 percent, 1980: 11.1 percent, 1981: 13.9 percent, 1982: 11.0 percent, 1983: 8.6 percent, 1984: 8.9 percent.--4) To Western industrial countries ("capitalist industrial countries") according to GDR statistics; converted to U.S.dollars via the ruble rate.

Sources: BIS (Bank for International Settlements): Semiannual statistics. Claims and obligations of the reporting banks, excluding inner-German capital transactions, excluding banks not reporting to the BIS, excluding loans by non-banks and supplier credits.--BIS/OECD: Statistics on external indebtedness: Bank and trade related non-bank external claims on individual borrowing countries and territories. Reporting of (official and officially guaranteed trading credits) begins in 1982. 1977-1981: Estimated.--Obligations arising from inner-German trade: Trust Agency for Industry and Trade (TSI)--German Institute for Economic Research, Berlin.

#### FOOTNOTES

1. See Doris Cornelsen/Manfred Melzer/Angela Scherzinger, "The GDR Economic System: Very Gradual Reforms," in German Institute for Economic Research (publishers), VIERTELJAHRSHEFTE ZUR WIRTSCHAFTSFORSCHUNG (1984), No 2.
2. Maria Haendcke-Hoppe, "Foreign Trade Reform and Foreign Trade Monopoly," in Research Agency for All-German Economic and Social Issues (publishers), FS-ANALYSEN (1985), No 5, pp 5ff.

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ECONOMY

GERMAN DEMOCRATIC REPUBLIC

VARIOUS METHODS OUTLINED FOR EXTRACTING FUEL FROM COAL

Leipzig ENERGIETECHNIK in German Vol 35 No 7, Jul 85 pp 268-271

[Article by Dr Gottfried Klepel, WKZ Carbon Chemistry at the VEB "Otto Grotewohl," Boehlen: "Possibilities for Producing Fuels From Coal"; manuscript received 5 February 1985]

[Text] The "possibility" of producing fuels from coal, that is, in the GDR from soft lignites, can be looked at from different viewpoints. The main part of this article will be concerned with technical and raw materials related questions. An economic assessment of the technical possibility of producing coal-derived fuels is, of course, the most interesting statement from the standpoint of the national economy, particularly in comparison with petroleum-derived fuels.

Therefore, a few basic reflections on the economic classification of the processes and products will be given first.

1. It is a fact that, in the case of lignites, a domestic raw material is put to use which does not burden the import balance of the national economy.
2. There is an infrastructure of the materials and energy economy in the GDR which came into being historically, according a significant position to lignite as primary energy carrier for making available electric and thermal energy, which must be maintained or expanded. Thereby, locations and development possibilities of lignite strip mines are set for long periods of time, and if necessary considerable expenditures are required of the national economy for additional coal quantities to be made available.
3. Every decision to produce fuels or organic raw materials from lignites by newly-to-be-created facilities assumes that all possibilities for extended processing of the existing crude petroleum are fully exhausted.
4. The processing of intermediate products obtainable from coal decomposition processes, which can involve great expenditures by the national economy, is to be assessed with consideration of demand by the domestic market and the criterion, difficult to evaluate, of sales in the export market.

Naturally, the technically and technologically worked out variants for production of coal-derived fuels will be economically quantified according to

conditions valid in the GDR. It is also clear to every professional colleague that here ever-higher specific costs are arrived at in comparison with petroleum processing. The specialist literature gives sufficient examples of this.

In what follows, a few brief comments will be made on the international state of development of carbon chemistry processes. Although, because of the trend in petroleum prices, the hectic phase of the renaissance of carbon chemistry of the 1970's is over, the fact remains that alternative processes for production of liquid raw materials and fuels will definitely be needed toward the end of this century and that, according to the specific conditions of the respective country, the use of these processes will occur at different times. For coal the development is concentrated in two main lines: the direct liquefaction of coal by hydrogenation and the indirect through gasification and synthesis. The International Energy Authority (IEA) gives the following evaluation of the pros and cons of both lines; when applied to conditions in the GDR, these are partially correct.

For indirect liquefaction the pros are as follows:

- the possibility of producing various end products,
- industrial experience from plants in operation,
- low dependence on the raw material, and
- simple reaction control.

The following are the cons:

- low thermal efficiency,
- difficulty in producing diesel oil and kerosene, and
- high plant cost.

For direct liquefaction, that is, hydrogenation, the pros are:

- higher thermal efficiency,
- the variable process arrangement for the production of high-octane gasoline, and
- the possibilities of producing kerosene.

The lack of current industrial experience is seen as a disadvantage.

In principle, it is stressed that coal decomposition processes, including their equipment, require a long period of development so that a time horizon well into the 1990's--mentioned for the application of such processes--suits the development schedule.

## On the Raw Materials Situation in the GDR

Every variant for a possible industrial, commercial application of new processes for fuels production from lignite can be assessed for the national economy only if the supply of coal, taking into account the site location and the time, in the required quantities and qualities, is taken into consideration with regard to the entire budget of the national economy. It has proved true that under actual conditions in the GDR this viewpoint has a decisive--if not the decisive--effect on overall effectiveness.

In Figure 1 characteristic values of several coalfields are shown. The comparison brings out the following factors:

--It is of fundamental technological importance whether lignites used come from the Lower Tertiary west of the Elbe River or from the younger fields east of the Elbe. These coals differ not only in the generally discussed characteristic values of water, ash, tar, and sulfur content, but also in many petrographic and coal geology properties.

--In the area west of the Elbe there are significantly large coalfields with saline lignites requiring special techniques.

--The lignites from west of the Elbe previously used at Leuna with relatively high tar and low ash contents (now corresponding approximately to the Schleenhain type) are no longer available for new high-tonnage uses.

--It is necessary to include the use of coal grades with poor quality characteristics, chiefly with regard to ash content, in the concept of scientific and technical preparations of new processing techniques.

	$A^d$ (1) (%)	$T_{SK}^{daf}$ (2) (%)	Na <sub>2</sub> O+Cl (%) (on a moisture- free coal basis)	Xylites (%)	Gelites (Vol-%)
Peres	10.4	23.5	--	3.3	14.8
Schleenhain	13.6	19.3	--	not determined	not determined
Merseburg-Ost (Merseburg-East)	13.1	16.1	1.9	3.5	4.9
Delitzsch-Suedwest (Delitzsch-Southwest)	19.0	12.2	0.11	10.0	5.8
Jaenschwalde	11.0	10.3	--	13.0	not determined
Fuerstenwalde-Ost (Fuerstenwalde-East)	15.6	9.6	0.13	10.0	36.0

Figure 1. Characteristics of Crude Lignites

Key:

1.  $A^d$  = Ash dry basis

2.  $T_{SK}^{daf}$  = Tar dry, ash-free basis

low-temperature carbonization coke

## On the Chemistry of Coal Decomposition Processes

Figure 2 shows basic problems in converting lignites into hydrocarbon mixtures (KWS-), that is, the high content in heteroatoms (O,S,N) and the relatively low hydrogen content in comparison with other fossil fuels.

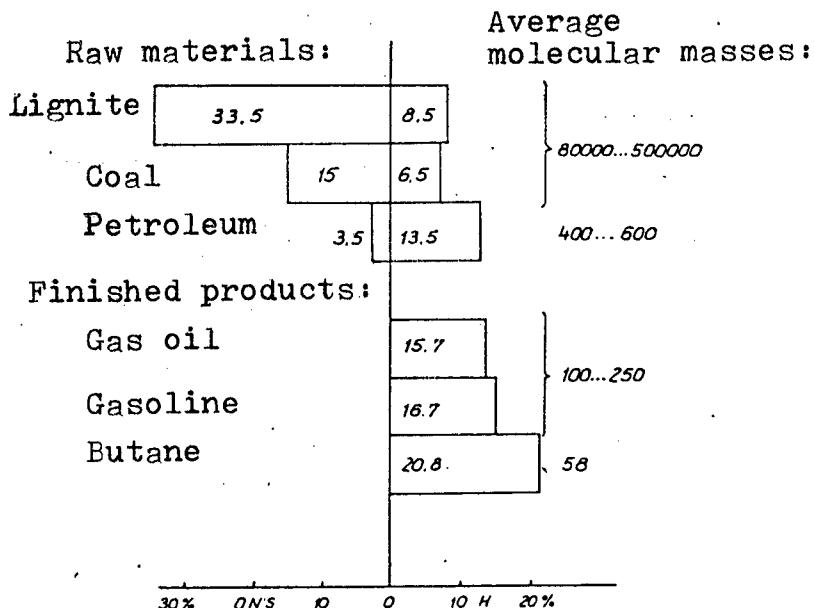


Figure 2. Average Molecular Mass and O, N, S, and H Content of Individual Raw Materials and Finished Products, According to M. Pier

Two fundamentally different technological courses and the corresponding totally different chemistries are shown in Figure 3. The desired end products can in principle be made just as well by the hydrogenation route--that is, to obtain the desired molecular size by the directed degradation of the organic coal substance while at the same time changing the H:C ratio by H<sub>2</sub> addition--as by the "brutal" conversion of the coal substance into a CO/H<sub>2</sub> mixture through gasification reactions and the following synthesis of hydrocarbon mixtures.

The effectiveness of technical solutions for these two (in principle) routes of coal decomposition depends to a varying extent on the coal substance and its impurities, which can be caused by coal geology, petrography, and also by mining technology.

Figure 4 shows the H:C ratio and the heteroatom content as a measure of the degree of decomposition of the lignite substance for different processes and intermediate products. The composition of the low temperature carbonization products represents the bitumen and resinous coal components and requires intensive hydrogenation for processing to hydrocarbon mixtures (fuels).

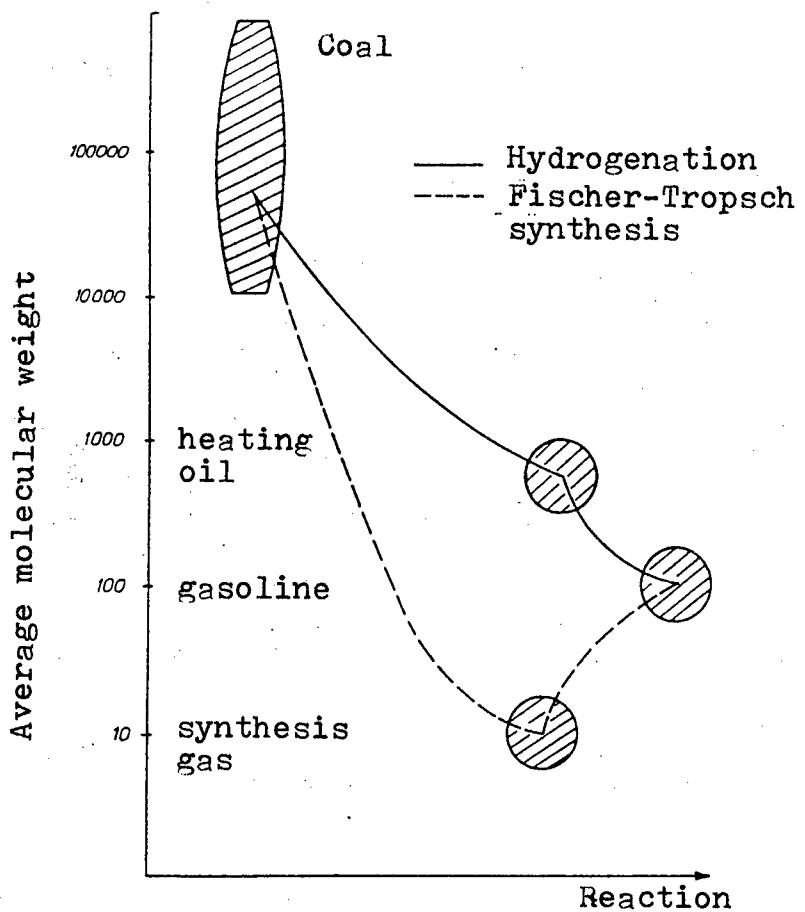


Figure 3. Reaction Courses in Coal Hydrogenation and Gasoline Synthesis

<u>Product</u>	<u>Grams H per 100 Grams C</u>	<u>O, S, N Content in percent</u>
Lignite	8.8	20.8
Low-temperature carbonization tar processing:		
Low-temperature carbonization	11.6	9.3
Sump phase stripper	13.6	1.5
Gas phase stripper	16.6	0.1
Coal hydrogenation:*		
Coal used	6.5	21.3
Stripper to 300°C	14.5	2.4
Stripper 300...400°C	14.0	2.1
Stripper above 400°C	12.5	1.9
Motor gasoline	17.6	0.4

\*Continuous pilot plant 5 kilograms/hour, 10 mega pascals [pressure], 425°C, molybdenum catalyst; coal used: Merseburg-East.

Figure 4. Coal Used at Merseburg-East

In coal hydrogenation different process principles are commonly known with regard to the degree of decomposition of the coal substance. Of course, the ideas on the end product which can be achieved vary correspondingly.

Catalytic high-pressure hydrogenation (Bergius-Pier principle) probably takes precedence for the production of fuels.

The end product of the hydrogenation process as such--the hot decanter head product--is better suited for hydro-treating than the low-temperature carbonization tar, that is, the expenditure for producing basic fuel components is lower; it is represented approximately in the figure by the stripper product to 300°C (normally what boils over to 325°C). Other hydrogenation conditions--for instance, according to the principle of mild hydrogenation (Uhde), hydrogenation with H<sub>2</sub> donors (Pott-Broche) or decomposition with CO/H<sub>2</sub> mixtures--yield decomposition products which in principle have a higher content of heteroatoms and a less favorable H:C ratio with respect to fuel production.

It is to be stressed particularly that such decomposition products can be quite advantageous for the production of phenols, paraffins, electrode coke or merely improved fuels. There is relevant international experience for this. In the GDR as well, work is in progress on the full utilization of possibilities for hydrogenating domestic lignites (saliniferous lignites also).

In connection with the chemistry and coal quality, further aspects are to be taken into consideration with a view to possible fuel production.

In gasification processes with regard to the premise of producing CO/H<sub>2</sub> mixtures for syntheses, one can from the outset be oriented to processes which result in total gasification to these end products, that is, processes with high gasification temperatures. Such technology opens up the possibility of using saliniferous lignites, because liquid slag discharge is required in any case. Saliniferous lignites are known to form low melting ash eutectics in thermal processes in the intermediate temperature range, which limits the industrial application of these lignites.

The possibility in principle of processing saliniferous lignites from the viewpoint of ash behavior certainly does not mean that many special research problems will not have to be solved successfully in order to manage the effect of alkali salts (often including chlorides), from mine to waste dump, in a way that is not harmful to the environment.

A possibility of desalting according to the principle of the hydrothermal process was found for the hydrogenation process, although at this time it cannot be assessed as economical.

In the hydrogenation of saliniferous lignites which are not pre-treated, on which work is going on, corrosion problems occur just as in gasification throughout the whole chain of processing steps; in the case of hydrogenation these are made more difficult by the high pressure range and the special problem of carbonyl formation.

If one leaves aside the special problems of saliniferous lignites, one must assume in the choice of a coal decomposition process in relation to coal quality that a modern productive pressure dust gasification process takes precedence over the hydrogenation process, in any case from the viewpoint of the requirements of coal quality. This holds true particularly under the above-mentioned conditions in the national economy of the GDR.

#### Further Progress in Coal Hydrogenation

It was shown up to now that, in connection with clarifying the possibility of producing fuels from lignites, a certain state of development with respect to available raw materials and the processes to be developed has been reached. Appropriate specific research and development work has been assigned. In shaping processes, experience available in the GDR and that which can be obtained from the literature was analyzed and evaluated. Development groups are working intensively under the direction of the Chemical Plant Construction [organization] of the GDR and by making use of pilot plants of different orders of magnitude. In this, priority is given to work on problems of adaptation of the hydrogenation process to available coal, the development of new process steps and the special analysis of coal decomposition products. Under the control of governmental institutions, cooperation is ensured from all appropriate research institutions of the combines, the Academy of Sciences of the GDR, and the universities. Establishment of an industrial pilot plant of appropriate size is at present under intensive preparation.

As regards content, the main emphasis of the development work is in the preparation of process steps for adaptation of the process to the coal actually available, in the optimization of energy and material economics--chiefly the process steps for processing the decomposition product--and in the development of process equipment and machines for special high-pressure conditions. All in all, the possibility that fuels can be produced in large quantities for the national economy of the GDR by the route of hydrogenation of lignites, when the key points of development mentioned have been solved, is today not out of the question.

#### Coal Gasification and Synthesis Gas Processing

Today, synthesis gas production and utilization already constitutes an important support of the GDR's chemical industry. At present the total capacity of all synthesis gas generation plants in the GDR is approximately 5 billion cubic meters a year; of this, 62 percent is produced from natural gas and 18 percent from lignite low temperature carbonization coke, which is gasified according to the Winkler process in Leuna and in Zeitz. In addition, fixed-bed pressure gasification, tied to the use of briquettes and lump lignite, is used for city gas generation in the VEB Black Pump Gas Combine. Both coal gasification processes operated in the GDR are strongly dependent on the quality of the gasifier feed. At present, the reconstruction of the Winkler Plant at Leuna is under preparation. Moreover, as already explained, a new gasification process is under development at the VEB Black Pump Gas Combine which will suit internationally accepted requirements for up-to-date gasification technology.

The design of up-to-date gasification technology of course includes appropriate gas preparation facilities for conditioning and purifying the raw gas for chemical syntheses for the production of fuels, because the CO/H<sub>2</sub> ratio and the purity of synthesis gas decisively affect the yields and service life of the catalysts.

The purified coal-derived synthesis gas can be fed into the existing infrastructures which process CO/H<sub>2</sub> mixtures, that is, the syntheses of fuel components are not dependent on the processing of coal-derived gases. However, in order to make coal competitive with other energy carriers, natural gas and petroleum, new highly effective syntheses must be developed for the production of fuels.

This is shown by the numerous articles in the area of CO/H<sub>2</sub> and methanol chemistry which report on new synthesis routes, which are of course also relevant to the GDR. These new developments are characterized by:

- Shortening of synthesis routes (for example, direct synthesis),
- Replacement of high pressure processes by intermediate and low pressure processes (for example, low pressure methanol synthesis),
- Use of selective catalysts with great structural differentiation (for example, zeolite catalysts).

Figure 5 shows various possibilities for producing fuels via the key product methanol. To extend methanol use, it must be produced in large quantities, for which only an up-to-date low pressure process should be considered. These can be considered for fuel production from methanol:

- The M-100 technology, that is, the use of pure methanol as a fuel. To carry out this variant, development of engines and construction of cars is absolutely required.
- Mixture technologies, that is, the addition of methanol to conventional motor fuel. National economy decisions are required for this because changes arise all along the line from the storage and distribution system to construction of cars; these relate chiefly to the problem of materials compatibility and the physicochemical properties of the methanol-gasoline mixture.
- The third possibility is the conversion of methanol into hydrocarbons over ZSM-5-zeolites. This process has not been tested on an industrial scale. The fuel can be used directly without adaptation measures. The main risk of this transformation is, however, in the large exothermicity of the reaction (45 to 60 kilojoules per mol), which last but not least also affects the service life of the catalysts. The process can also be steered in the direction of chemical raw materials such as olefins and aromatics, by modification of the catalyst and reaction conditions.
- The acid-catalyzed reaction of branched olefins with methanol to ethers leads to products which make excellent motor fuel components and can be added to conventional fuel up to 20 percent without adaptation measures.

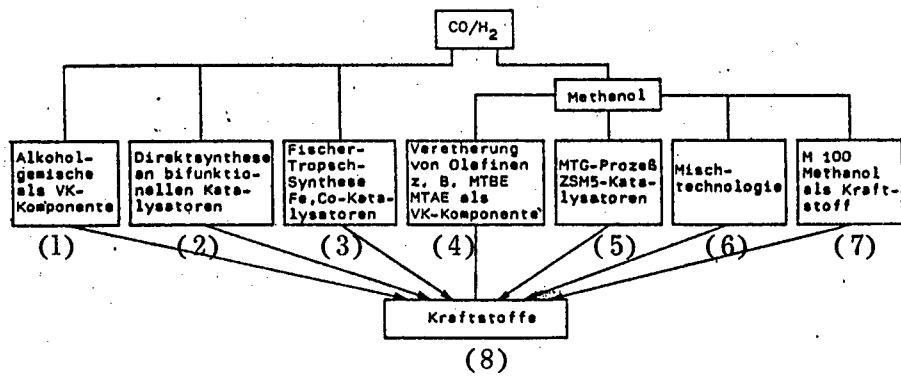


Figure 5. Possibilities for Producing Motor Gasoline From Synthesis Gas

Key:

1. Alcohol mixture as motor gasoline components
2. Direct synthesis over bi-functional catalysts
3. Fischer-Tropsch synthesis Fe, Co catalysts
4. Ether synthesis from olefins, for example, MTBE, MTAE as motor gasoline components
5. MTG [methanol to gasoline] Process ZSM5 catalysts
6. Mixing technology
7. M 100 methanol as a fuel
8. Fuels

To produce fuel components directly from CO/H<sub>2</sub> mixtures, three possibilities can be considered in particular:

1. The Fischer-Tropsch synthesis known for decades. This is, however, at this time operated industrially only in South Africa because of the favorable conditions existing there.
2. Conversion of CO/H<sub>2</sub> mixtures directly to hydrocarbons over metal-modified zeolites is possible. This can also be carried out in two steps. The entire reaction is highly exothermic.
3. The possibility also exists of building the CO molecule entirely into the end products. The synthesis of alcohol mixtures from synthesis gas is known. Such alcohol mixtures can be mixed with the fuel as a motor fuel component. In addition, in case of introduction of a mixing technology (for example, M 15), they are absolutely required as solubilizers.

These explanations should have expressed the fact that the route of fuel production by way of gasification--chiefly of saliniferous lignites--and synthesis under actual conditions in the GDR can have equal significance with hydrogenation, where here as well considerable development work remains to be done. For this line of development also, all necessary research and development work has been initiated, under central control so that economically based decisions can be made in as short periods of time as possible. Similarly to the hydrogenation route, the total expenditures by

the national economy for coal decomposition up to the distribution system of the end products is being looked at.

In line with the spirit of the subject matter, it is to be established in conclusion that there are possibilities, in principle, for the production of fuels from lignite in the GDR, that the required decisions for the scientific and technical preparation of possible routes have been made, but that decisions of serious import for the national economy on the construction of large plants cannot yet be made and are at present not yet required.

5586/6091  
CSO: 2300/185

ECONOMY

HUNGARY

#### INCOME REGULATION OF ENTERPRISES IN 1986 DISCUSSED

Budapest PENZUGYI SZEMLE in Hungarian No 1, Jan 86 pp 19-24

[Article by Ella Ronaszeki: "Regulation of Enterprise Income in 1986"]

[Text] Following the significant, overall modification of the system of economic management and system of economic regulation as of 1 January 1985, the intention was expressed not to introduce in the system of economic regulation any essential changes affecting its basic principles, until the long-range objective could be realized that has been formulated in the elaborated comprehensive concept of developing further the system of economic management, i.e., to transfer to the sphere of circulation a significant proportion of the taxes now burdening the sphere of production, and to modify thereby the structure of net income. However, we can expect such sweeping changes in the tax structure only in the second half of the 7th Five-Year Plan. But even until then, of course, minor modifications in the system of economic regulation and changes in its rates may be necessary, for a number of reasons.

The 7th Five-Year Plan beginning in 1986, and its principal economic-policy objectives warrant certain rate corrections in the tools of the system of economic regulation.

Moreover, fairly many temporary concessions were built into the system of economic regulation in 1985, because some areas were unable to adapt immediately to the changed requirements. We announced already then that these concessions would be temporary.

Finally, practical experience since the regulators' introduction has revealed the need of minor corrections.

Our aim when drafting the modifications for 1986 in the system of economic regulation has been twofold:

--One important objective has been to better enhance, through the system of economic regulation, the assertion of certain economic and social preferences (such as export-oriented development projects, for example), without jeopardizing domestic and external economic equilibrium. As an important tool for achieving this objective, it has been proposed to reduce the rather high rate of the accumulation tax, in such a way that the necessary resources will be ensured by dismantling the temporary tax concessions.

--The other important aspect has been to really avoid major changes and another rearrangement. Thus a modification that in fact had already been announced for 1986--namely, to base on wages the municipal or community development contributions [local taxes], respectively to raise the rate of the payroll tax--has been shelved, on the basis of investigations conducted during the year.

The preliminary investigations revealed that the dismantling of the temporary concessions would be possible only on a much smaller area than imagined originally, due in part to slower adaptation and in part to the worsening conditions. Work on drafting the national economic plan for 1986 proceeded parallel with these investigations. And as a part of annual planning, the foreseeable development of the economic processes in 1985 called attention to several important unfavorable trends.

Industrial production and farm production are falling significantly short of the plan; the input costs per unit of output, and energy consumption are developing unfavorably. Within nonruble-denominated commodity trade, the expansion of export is likewise falling well short of the plan, while import is rising significantly over recent years and in comparison with the plan as well. It can be established that the necessary improvement of economic performances is not being realized. Of the plan's principal objectives, essentially only the ones pertaining to national income's domestic use and the balance of ruble-denominated trade are being realized. But production, national income, and nonruble-denominated commodity trade are developing less favorably than what the plan calls for.

For all the mentioned reasons, there are unfavorable trends also in the processes of generating fiscal revenue that are reflected in the state budget, in a concentrated manner. Due to the shortfalls in production and export in comparison with the plan, and to the decline of efficiency, transfers of revenue by business organizations to the state budget are below the estimates. The costs of energy imports in excess of the plan, the subsidies for energy production, and the decline of world-market prices affecting farm and food-industry exports have all had an unfavorable impact on the state budget's balance, respectively they have not made possible the planned centralization of incomes.

It is difficult to assess unambiguously to what extent and how long the unfavorable results of the economy's development in 1985 will affect the economic processes in the coming years and next year in particular. The efficiency-reducing, disequilibrating and growth-retarding effects of certain factors (the exceptional consumption and imports of energy, and the production dropouts due to the severe winter, for example) will presumably cease. And, in all likelihood, the worsening trends of some of the other factors can be expected to stop.

In the economic processes of 1985, however, there are also unfavorable factors which are more difficult to change, and which will certainly make themselves felt also in the coming years, particularly in 1986. Such factors are primarily production's unsuitable structural adaptability; and, in the difficult situation, the producers' unsatisfactory or not sufficiently successful efforts to expand export denominated in convertible currency and to cut production

costs. The progress that can be achieved in these areas will continue to determine to a large degree the attainable rate of economic growth and the extent of economic equilibrium's improvement.

The worsening net balance of the relations between the state budget and the enterprises poses a special problem. The centralization of income in the state budget will foreseeably fall 1.5 percent short of the plan in 1985, and there will be a further decline of about 3 percentage points in 1986 if no measures are adopted to prevent it.

These figures present in a new light the enterprises' general belief that the tax system burdens the enterprises excessively and in practice deprives them of any room for maneuvering. When we speak of centralization, of course, we have to take into consideration not only the income that the state budget withdraws from the enterprises, but also the grants and subsidies which the state budget returns to the productive sphere or which increase the enterprise sphere's income. The real problem is that the grants and subsidies are increasing in 1985 and in 1986 as well. Under these conditions the state budget's deficit would swell intolerably in 1986.

Naturally, a balanced budget in itself is not some priority of economic policy. But it is essential to ensure the income which will have to be withdrawn from the economy to cover the budgetary deficit, and also for the minimal reduction of our total foreign debt as specified in the national economic plan. The ensuring of this income, and a tolerable budgetary deficit, will depend on the ability of the other two large spheres of income recipients--the population and the enterprise sphere--to save enough to finance these two things, by recycling their savings through the credit sphere. Under the present conditions, we cannot realistically and reliably expect such an ability to save, and forced savings have to be avoided at all cost. In this way our budgetary deficit and its magnitude are directly related to our international financial obligations and external equilibrium. This is the reason why the budgetary deficit may not exceed a certain limit. But in view of the fact that another of our very important objectives--besides stabilizing the net balance of our budget and national economic equilibrium in a broader sense--is to produce the conditions for more dynamic development, we had to make the modifications of income regulation for 1986 serve both of these objectives simultaneously.

The modifications for 1986 in the system of enterprise income regulation affect neither the basic principles of the system of income regulation introduced as of 1 January 1985, nor the tax structure. The change is more of a corrective nature, comprises modifications of the rates within the system of economic regulation and of some of its specific solutions, and serves several objectives.

#### Incentive Cuts, Restrictive Increases of Certain Normative Tax Rates

The rates of certain normative taxes will change in 1986. Their corrections jointly will serve two main objectives: Realization of economic policy's main priorities must be enhanced also by modifying the system of economic regulation, but this must be achieved in a way that will not prejudice the national economic plan's requirements regarding domestic and external equilibrium. In the present economic situation this can be solved only through a combination of restrictive tax increases and incentive tax cuts.

To promote structural policy and improve external economic equilibrium--and within this particularly to provide long-term incentives for the expansion of export denominated in convertible currency--the rate of the accumulation tax on investment projects for the expansion of export, and on specified investment projects under certain preferential programs of economic development, is being reduced from 18 percent at present, to 8 percent as of 1 January 1986. This abatement of the accumulation tax on investment projects for the expansion of export will be granted under a system of competitive bidding. The enterprises and--on behalf of the government--the Ministry of Foreign Trade will conclude agreements on increasing the export from investment projects for its expansion. In addition to specifying the efficiency requirements that the investment projects must meet and the granted tax abatement, the agreements will also contain the enterprises' obligations.

Should the enterprise fail to fulfill the conditions specified in the agreement, it will have to pay, retroactively and in one sum, the difference between the generally applicable rate of the accumulation tax and its preferential rate.

If the government or its committee so decides, the 8-percent rate of the accumulation tax may also be applied to specified investment projects under certain preferential programs of economic development (e.g., the programs for the rationalization of energy consumption or for economization in the use of materials).

As of 1 July 1986, the general rate of the accumulation tax will be reduced to 15 percent, from 18 percent at present. This measure will serve to stimulate the process of capital accumulation or will provide the prerequisites for it.

The reduction of the general rate of the accumulation tax and its preferential abatement will add approximately 4.0 to 4.5 billion forints to the enterprises' resources for development.

However, the incentives provided in the interest of structural change and more dynamic development have had to be combined also with regulatory measures of a restrictive nature. To stabilize the national economy's external and domestic equilibrium and the state budget's net balance, and to produce the resources necessary to stimulate the priorities, it has been necessary to increase by 5 percentage points the rate of the enterprises' linear profit tax, and from 35 to 38 percent the income-tax rate of small cooperatives subject to gross income regulation. The increase of the profit tax, respectively of the income tax, will have a positive effect on the state budget's net balance already in 1986, but its restrictive effect on the enterprises' resources for development will be felt only later, in 1987.

#### Measures to Stimulate Flow of Capital, Equipment

In 1986, as a part of the elaborated comprehensive concept of perfecting the system of economic management, several new measures have been introduced that will promote, in 1986 and thereafter, the flow of capital and equipment in the economy. The effectiveness of these measures is being enhanced also by incentives provided within the system of economic regulation. The more important

measures in this group are as follows: a further increase of the role of commercial capital and the perfection of its system of institutions; introduction of the system of state development-fund grants; and, with the help of regulators, the encouragement of machinery and equipment leasing.

To aid the flow of capital, the commercial house will be a new type of business organization that combines the functions of marketing, production, farming out production, financing and lending.

The commercial house can become a close link between the foreign and domestic markets on the one hand and production on the other, respectively an attractive form of moving idle capital. Business organizations will have to undertake to establish commercial houses on the basis of their own interests. But we will encourage the initial spreading of this form also with the tools of economic regulation, with temporary concessions (that do not distort the real economic interests and do not violate the requirement of economic efficiency).

At the time of establishing a commercial house, its charter members may claim a one-time profit-tax deduction that may not exceed 5 percent of the profit on which the tax is based. In addition to this one-time profit-tax deduction for the charter members, the commercial houses themselves are entitled to temporary tax concessions during the first years of their operation. Such concessions are:

- Temporary exemption from property tax: complete exemption during the first two years, and 50-percent exemption during the third year;
- Profit tax abatement: commercial houses pay 50 percent of the general profit tax the first year of their operation, 75 percent the second year, and 90 percent the third year.

Enterprises are free to establish commercial houses if they so choose. But to qualify for the tax concessions, a commercial house, respectively its charter members, must meet the following conditions:

- The investment or share of any charter member may not exceed 50 percent of the joint assets or capital stock of the commercial house; and
- The commercial house must function as an incorporated business association or a corporation.

The minister of finance approves the tax concessions, on the recommendation of the ministers of domestic trade and foreign trade.

A measure intended to stimulate the circulation of used fixed assets exempts from the payment of accumulation tax the purchase of fixed assets capitalized before 1 January 1985, and also the acquisition of fixed assets on which one of the previous owners has already paid accumulation tax. This measure will facilitate the easier transfer or better utilization of fixed assets when the product mix is changed, an activity is phased out, or an enterprise undergoes liquidation.

Tax abatement for the leasing of machinery and equipment supplements the rules of enterprise income regulation. Accordingly, as of 1 January 1986, enterprises, financial institutions, cooperative savings associations, and banks will pay accumulation tax uniformly at a favorable rate of 8 percent on the machinery and equipment they acquire for the purpose of leasing them. The more favorable tax treatment of equipment leasing will enable enterprises to respond faster and more flexibly to changes in market demand; and to gain access, temporarily even without investment outlays, to the machinery and equipment they need for changing their product mix. Furthermore, it will be easier to utilize in other areas the surplus equipment of a given plant.

Supplementing the existing forms of financing, the system of development-fund grants by the state is a new form of state participation in the financing of investments.

In the case of energy-related (fuel-industry and electric-power-industry) development projects among the investment projects that are decided centrally, the state has broadened the possibilities of the existing forms of financing by adding the method of development-fund grants. Accordingly, the own resources of enterprises that undertake such investments may be supplemented by development-fund grants from the state, for which the enterprises must pay a fixed and a variable (exceptionally only a fixed) annuity. The source from which the variable annuity is paid is the enterprises' pretax profit. This annuity may be specified as a percentage of the sum of the annual balance-sheet profit plus the annual depreciation charge, with due consideration for the ratio of enterprise assets from the development-fund grant to the enterprise's own assets augmented by the development-fund grant.

As state aid for enterprise investments, the development-fund grant provided by the state may amount to as much as the Hungarian partner's capital contribution when founding a new enterprise, decentralizing an existing one, or in the case of a joint enterprise abroad. As a rule, however, the development-fund grant provided by the state may not exceed 30 percent of the total investment cost. This limit may be exceeded in the fuel and electric power industries, the lime and cement industry, the brick and tile industry, and in the case of public utilities. In exceptional cases, the Council of Ministers may waive this rule. When the state provides development-fund grants for investments that are not decided centrally, a variable annuity alone may be specified, without a fixed annuity.

#### Regulation of Activities Enjoying Economic or Social Priority

A typical group of modifications in the system of economic regulation comprises tax concessions that are associated with specified economic or social priorities and affect certain types of activity, rather than a particular sector or specialized subsector. Such tax concessions are as follows:

--To ease the financial burden that the training of apprentices places on the enterprises and as an incentive for such enterprise activity, investments that are intended specifically for the training of apprentices are exempt from property tax and accumulation tax. Furthermore, the scholarships and wages paid in

conjunction with the training of apprentices are exempt from wage tax, respectively the scholarships that small cooperatives give their apprentices are not subject to income tax.

--To aid the occupational rehabilitation of disabled workers, business organizations are entitled to a grant for this purpose and may place the grant directly in their incentive fund. At the enterprise this provides the resources for hiring more disabled workers. Furthermore, the earnings of disabled workers are exempt from tax on earned income.

--As an incentive to stimulate housing construction, enterprises may claim a profit-tax credit of 20,000 forints in general, but 24,000 forints in Budapest, for every housing unit they accept as completed. Every enterprise subject to enterprise income regulation is entitled to claim this tax credit.

--In the interest of preserving folk customs, the production of folk art and of traditional cottage industry products as an economic activity is entitled to profit-tax abatement.

--To provide more support for retail trade in small settlements, business organizations of domestic trade operating in such areas are entitled to profit-tax abatement.

--To make them more viable, the specialized subsectors of the retail food trade, grocery trade and catering, and the consumer cooperatives belonging to the grocery trade subsector may claim as a credit against their profit tax 50 percent of their cost increase due to higher rent (or 100 percent specifically in the case of retail food stores).

--In the case of seasonal food stores, the shift premiums, the premiums for store hours on Sundays and holidays, and the overtime premiums are exempt from payroll tax.

--The measure that exempts from excess profit tax as of 1 January 1986 the activities of technological planning and investment project management, performed as hard-currency export, is intended to make these activities more competitive.

#### Reduction, Abolition of Tax Concessions

An important objective in modifying income regulation for 1986 was to reduce or abolish the tax concessions that the new system of income regulation had granted the enterprises temporarily at the time of its introduction in 1985, to help them adapt gradually.

However, the 1986 modifications have been able to achieve this objective only partially. The enterprises' adaptation to the new and stricter requirements of economic efficiency is being extended, and progress is slower than necessary.

In several areas--thus in the building construction industry, at research institutes, at certain R&D enterprises, in the foreign-tourist industry, and at

the Cultured People Book Distribution Enterprise and the State Book Distribution Enterprise--the payroll-tax concession has ceased as of 1 January 1986 or will cease gradually in 1987.

In four specialized subsectors of the textile industry (namely in the cotton industry, the wool industry, the flax, hemp and jute industry, and the silk industry), and also in highway and air transportation, the property-tax concession has been reduced or terminated as of 1 January 1986. In the textile industry, the enterprises concerned will themselves have to earn sufficient additional resources to compensate for the reduction of their property-tax concession. In highway and air transportation, the enterprises will have to earn the resources to absorb a third of the additional burden resulting from the termination of their property-tax concession. We are offsetting the remaining two-thirds of the additional burden by reducing the excess profit tax in highway transportation, and with budgetary subsidies in air transportation. The property-tax concession is being phased out (gradually through 1988) also in the specialized subsector of housing and utilities construction.

#### Corrective Modification of Some Rules

On the basis of the experience gained during the first year of the new system of economic regulation, corrective modifications of some of its rules have become necessary. The more important of these corrective modifications are as follows:

--To reduce the shortfall of tax revenue, as of 1 January 1986 there will be a technical change in the source from which payroll tax is paid: next year this tax will have to be paid from the incentive fund, rather than from the profit after taxes.

--The social-security contributions on the scholarships and sport-staff wages paid from the cultural and social services fund must also be paid from this fund; the resources for paying the social-security contributions may be charged to cost and placed in the cultural and social services fund.

--The wages for work performed under a voluntary work drive are exempt from payroll tax.

--Before devising new rules for economic rehabilitation or liquidation, it has become necessary to modify the way in which the enterprises' debts and fund deficits are settled, so that it will conform to the 1985 regulation of enterprise income. To this end, streamlined rules on settling the enterprises' debts and fund deficits will be included in the decree regulating enterprise incomes.

--Modification of the rules governing cooperative members' shares and special-purpose shares reflects recognition of the peculiarities of cooperatives. As of 1 January 1986, there will be no statutory restriction on the amount of the special-purpose share a person may buy annually, and the maximum interest payable on a member's share and the amount of dividend per special-purpose share will be in harmony.

ECONOMY

YUGOSLAVIA

FUNDS FOR NONECONOMIC SECTOR PROJECTS IN 1986 BUDGET

Belgrade SLUZBENI LIST SFRJ No 75, 31 Dec 85 pp 2304-2305

[Order adopted by the SFRY Assembly in Belgrade 27 December 1985 and signed by Ilijaz Kurteshi, president of the SFRY Assembly, and Dr. Miodrag Trifunovic, president of the Federal Chamber: "order on distribution of resources for noneconomic investments set forth in the federal budget for 1986"]

1. The funds for noneconomic investment set forth in the Federal Budget for 1986, in the amount of 8,000,000,000 dinars [original reads "8,000,000"] are to be distributed among the following beneficiaries:

No.	Beneficiary and Purpose	Dinars
1	2	3
1.	SFRY Assembly	
	- purchase of equipment necessary for the work of the staff services	170,000,000
2.	Federal Executive Council	
	- share of the Federation in building the room for holding ceremonies at the Belgrade airport	45,000,000
	- work to connect the museum to the heating system and work on the old museum (Josip Broz Tito Memorial Center)	30,000,000
	Department of the Federal Executive Council for Defense Preparations	
	- completion of the projects envisaged by law	85,000,000
3.	Federal Secretariat for Foreign Affairs	
	- necessary repair of buildings of our diplomatic and consular missions abroad	600,000,000
4.	Federal Secretariat for Internal Affairs	
	- modernization of the service Security Institute	600,000,000
	- modernization of the service	250,000,000
5.	Federal Secretariat for Jurisprudence and Organization of the Federal Administration	
	Data Processing Bureau of Federal Bodies and Agencies	
	- modernization of the service	50,000,000
6.	Federal Secretariat for Information	
	- construction and modernization of the technical facilities Radio Yugoslavia	700,000,000

7.	Federal Secretariat for Transportation and Communications	
	- capital investment work and purchase of equipment and technical requisites for regulation of the Danube from Belgrade to the Yugoslav-Hungarian border	200,000,000
	- modernization of the Institution for Maintaining Inland Waterways	100,000,000
	- modernization of the Institution for Maintaining Seaways	250,000,000
	Federal Flight Control Administration	
	- modernization of the service	1,500,000,000
	Federal Radio Communications Administration	
	- modernization of the service	100,000,000
8.	Federal Committee for Labor, Health and Social Welfare	
	- for temporary safe storage of radioactive waste	146,000,000
9.	Federal Customs Administration	
	- modernization of the service	800,000,000
	- share in building the border crossing at Gradina	200,000,000
	- share in building the border crossing at Dojran	140,000,000
10.	Federal Bureau for International Scientific, Educational and Cultural, and Technical Cooperation	
	- modernization of the service	20,000,000
11.	Federal Hydrometeorology Bureau	
	- modernization of the service	150,000,000
12.	Federal Bureau for Standardization	
	- modernization of the service	20,000,000
13.	Federal Bureau for Patents	
	- modernization of the service	10,000,000
14.	Federal Bureau for Weights and Measures and Precious Metals	
	- modernization of the service	54,000,000
15.	Yugoslav Archives	
	- building repairs	20,000,000
16.	Department for Rendering Services to Meet the Entertainment Needs of Federal Bodies and Agencies	
	- annual payments on two diesel locomotives and purchase of equipment	50,000,000
17.	Department for Air Transport of Federal Bodies and Agencies	
	- to continue work on hangar adaptation and for purchase of equipment	100,000,000
18.	Administration for Management of Office Buildings of Federal Bodies and Agencies	
	- repair and adaptation of office buildings	300,000,000
19.	Garage of Federal Bodies and Agencies	
	- for construction of the open shed and other investment purposes	50,000,000
20.	Translation Department	
	- modernization of the service	40,000,000
21.	Yugoslav Red Cross	
	- repair of the office building	220,000,000
22.	Housing Construction of Federal Bodies and Agencies and Federal Organizations	
		1,000,000,000

2. The funds set forth under Number 22 in Paragraph 1 of this order are to be used to carry out the Program for Acquisition of Housing to Meet the Needs of Federal Bodies and Agencies over the Period from 1986 to 1990.

3. This order shall take effect on the eighth day after publication in SLUZBENI LIST SFRJ.

7045

CSO: 2800/156

ECONOMY

YUGOSLAVIA

INTEREST-FREE LOANS, OTHER PAYMENTS TO FUND FOR UNDERDEVELOPED

Belgrade SLUZBENI LIST SFRJ in Serbo-Croatian No 5, 7 Feb 86 pp 115-116

[Decisions of the Assembly of the Federal Fund for Credit Financing the Faster Development of the Economically Underdeveloped Republics and Autonomous Provinces adopted 23 January 1986 in Belgrade and signed by the president of the fund's assembly, Tone Krasovec]

[Text] Decision Fixing the Amount of the Interest-Free Loan Which the Republics and Autonomous Provinces Are To Furnish and Make Payable to the Federal Fund for Credit Financing the Faster Development of the Economically Underdeveloped Republics and Autonomous Provinces in 1986

1. The resources of the interest-free loan to the Federal Fund...being furnished by the republics and autonomous provinces pursuant to Article 2, Paragraph 1, of the Law on Postponement of Payments Against Credits Extended to Organizations of Associated Labor in the Socialist Autonomous Province of Kosovo out of the Resources of the Federal Fund for Credit Financing the Faster Development of the Economically Underdeveloped Republics and Autonomous Provinces Coming Due 1 January 1986 (hereinafter "the Law") for 1986 are hereby fixed in the amount of 6,506,255,000 dinars.

2. The amount of the resources referred to in Point 1 of this decision shall be furnished as follows:

<u>SR's and SAP's</u>	<u>In Dinars</u>
SR Bosnia-Hercegovina	819,788,130
SR Montenegro	144,438,861
SR Croatia	1,683,818,794
SR Macedonia	329,867,129
SR Slovenia	1,033,843,920
Serbia proper	1,675,360,662
SAP Kosovo	113,208,837
SAP Vojvodina	705,928,667
Total	6,506,255,000

3. This decision shall take effect on the date of publication in SLUZBENI LIST SFRJ.

Decision on the Annual and Monthly Advance of Resources of the Federal Fund  
for Credit Financing the Faster Development of the Economically Underdeveloped  
Republics and Autonomous Provinces for 1986

1. The level of the annual advance of resources of the Federal Fund for  
Credit Financing the Faster Development of the Economically Underdeveloped Re-  
publics and Autonomous Provinces for 1986 (hereinafter "the Fund") is hereby  
established in the following amount:

<u>SR's and SAP's</u>	<u>In Millions of Dinars</u>
SR Bosnia-Hercegovina	34,059.5
SR Montenegro	5,125.2
SR Croatia	62,171.4
SR Macedonia	14,199.1
SR Slovenia	40,012.4
SR Serbia	86,702.0
Breakdown:	
Serbia proper	55,542.5
SAP Kosovo	5,739.3
SAP Vojvodina	<u>25,420.2</u>
Total	242,269.6

2. The republics and provinces will furnish the amount of resources referred  
to in Point 1 of this decision by pooling labor and resources and by paying  
the mandatory loan to the Fund in the following annual and monthly amounts:

<u>SR's and SAP's</u>	<u>In millions of dinars</u>			
	<u>Pooling of Labor and Resources</u>		<u>Mandatory Loan</u>	
	<u>Annual Amount</u>	<u>Monthly Amount</u>	<u>Annual Amount</u>	<u>Monthly Amount</u>
SR Bosnia-Hercegovina	18,797.4	1,566.4	15,262.1	1,271.9
SR Montenegro	2,828.6	235.7	2,296.6	191.4
SR Croatia	34,312.4	2,859.4	27,859.0	2,321.6
SR Macedonia	7,836.5	653.1	6,362.6	530.2
SR Slovenia	22,082.8	1,840.2	17,929.6	1,494.1
SR Serbia	47,850.8	3,987.6	38,851.2	3,237.6
Breakdown:				
Serbia proper	30,653.9	2,554.5	24,888.6	2,074.1
SAP Kosovo	3,167.5	264.0	2,571.8	214.3
SAP Vojvodina	<u>14,029.4</u>	<u>1,169.1</u>	<u>11,390.8</u>	<u>949.2</u>
Total	133,708.5	11,142.4	108,561.1	9,046.8

3. This decision shall be applied as of 1 January 1986.

4. This decision shall take effect on the date of publication in SLUZBENI  
LIST SFRJ.

ECONOMY

YUGOSLAVIA

DATA ON STUDENT LIVING STANDARDS, AID

Zagreb DANAS in Serbo-Croatian 21 Jan 86 pp 18-19

[Article compiled from reports by N.H. in Ljubljana, E.H. in Sarajevo, D.V. in Belgrade, and M.S. in Zagreb: "Prices of Housing and Food"]

[Text] Ljubljana

Of the approximately 13,000 students of Ljubljana University 1 out of 3 has a place in a dormitory, and every other one has a scholarship, either a stipend from an enterprise or one paid out of pooled resources, referred to as a welfare scholarship. The bulk of the scholarships (70 percent) are from enterprises and range from 11,172 dinars to 20,110 dinars, though students in schools for occupations for which there is a shortage also have a supplement of 3,720 dinars. The welfare scholarship depends on the financial condition of the parents and ranges from 12,714 dinars if the student lives with his parents in Ljubljana to 23,312 dinars if he lives in a dormitory. In addition to those amounts he may obtain a supplement of 2,118 dinars if he is a very good student or 4,237 dinars for excellent academic achievement.

The university student in Ljubljana pays on the average about 3,800 dinars for a room, whose economic price is 7,237 dinars, and he pays 240 dinars for a meal which costs 370. In the first case the difference is covered by the Republic Education Community, and in the second out of the pooled resources which the Slovenian economy sets aside on the basis of a 1.5-percent appropriation from gross personal incomes of all employed persons. Although this seems acceptable at the moment, a majority of students do not favor subsidies and grants, since they feel that the scholarship should correspond to the price of the "university student market basket," which is estimated at about 35,000 dinars.

That represents two-thirds of the average personal income in Slovenia, which is the percentage which scholarships reached in 1980.

Sarajevo

At the moment the average price of housing in Sarajevo dormitories is 1,682 dinars. If we add to this the daily price of lunch and dinar for students, which is 137 dinars, then he can cover the entire month for about 5,800 dinars.

There are 3,762 beds available for the estimated 12,500 university students in Sarajevo who have come to this city from other places. According to some estimates the housing in the student center is overbooked by another 2,000 "legal illegals." Facilities in the B category represent about 70 percent of the housing thanks to the Olympics. The most expensive housing, 2,200 dinars, is paid in the Mladen Stojanovic Dormitory, where the tenants have double rooms with facilities and 16 apartments. The cheapest housing is in the old and dilapidated Vladimir Peric-Valter Dormitory, where a place in a five-bed room costs 1,200 dinars. The average price of food and housing, taken from last month, will be 9,273 dinars and will remain in effect for the entire year. In Bosnia-Hercegovina 4,678 university students receive student loans, which following the increase this month amount to 9,895 dinars. There are no precise records on the number of scholarships.

#### Belgrade

As of 1 November of last year the average price of housing in Belgrade dormitories was 29,950 dinars. The student pays 9,413 dinars out of his own pocket, and the rest is paid by the Republic Community for Targeted Education of Students From Serbia Proper. The daily price for three meals is 793 dinars, but the student pays 31 percent, or 246 dinars.... This amounts to 7,380 dinars a month.

According to certain calculations, the amount which students pay for housing and food does not exceed 80 percent of the average value of the student loan. It is also assumed that about 12,000 students take advantage of this type of food and housing. Although improvement of the student standard of living is emphasized, one cannot speak of any major advance, since not much is left to the student, especially with the constant rise in the prices of textbooks, transportation, and everything else. However, it is not difficult to prove that it is much more difficult for their colleagues renting rooms from various "landladies," since they pay 10,000-15,000 dinars a month per person.

#### Zagreb

By comparison with the other republics and provinces Croatia has the fewest university students per 10,000 inhabitants, and it is also at the bottom of the ladder in comparisons with European countries at approximately the same level of development. Only 6,295 out of the 34,000 university students in Zagreb can be accommodated in dormitories. At present the students in Zagreb, and this is much the same in other university cities in the republic, pay 104 dinars per meal to eat in the student restaurant, which amounts to 6,240 dinars per month for two meals. Public subsidies represent nearly 70 percent of the funds for feeding students. The economic price of a bed in student dormitories in Zagreb is about 10,000 dinars, which means that here again society is paying a subsidy of 4,200 dinars. For every dinar which university students pay for housing and food, society provides a total subsidy of 2 dinars.

Instead of the proclaimed increase in the number of those using student loans, there has been an evident drop; last year, for instance, loans were taken by 16,630 high school and university students from Croatia. The reason for this

drop lies in the fact that self-managed communities of interest for targeted education made a structural shift in 1985 in the commitment of their resources to other programs from the previous 4.6 percent for the standard of living of high school and university students and the 3 percent for credits and scholarships. At the end of last year organizations of associated labor planned to conclude 5,990 contracts, within which only 257 were with students in junior postsecondary schools and 505 with university students.

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ECONOMY

YUGOSLAVIA

#### INCREASED PERSONAL EARNINGS, CONSUMPTION SURVEYED

Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 3 Feb 86 pp 19-20

[Article by Tomislav Dumezic: "Did You Say Standard of Living?"]

[Text] The total amount of personal incomes paid out and the average net personal incomes have been growing more rapidly, especially since last October. Is this a sign that the burden of stabilization has begun to lighten, at least for those employed in the socialized sector of the economy and in noneconomic activities; that enterprises are increasing personal incomes when accumulation is shrinking and losses are increasing; that personal incomes will be one of the principal causes of inflation this year, which (through the increased domestic demand) would tend to diminish exports and to aggravate still further the problems the country already has with the balance of payments?

The average net personal income paid per worker last December was in nominal terms about 40 percent higher than the average for the entire year 1985. That is an element in the increased costs of business operation which will certainly be part of the prices of goods and services this year. But prices will also rise for other reasons. We are referring to the interest on credits, which will increase regardless of the possible adjustment of interest rate policy, since the total amount of outstanding credit will increase by at least 50 percent over the average amount outstanding in 1985. Uncovered negative differences in exchange rates will also increase nominally, and a portion of them will have to go into the cost price of products and services. And the uncovered losses, which have been growing substantially, will also tend to raise prices in the coming year. All these and other causes of inflation will have to bring about a further rise in nominal personal incomes of persons employed in the economy and noneconomic activities, so that this new rise of personal incomes will be another source of price increases this year.

Personal incomes, at least up to now, have not been a cause of inflation. This assertion can be proven with this simple fact: nominal personal incomes have always (and inadequately) been adjusted to the rise of prices, which proves the 5-year drop in real personal incomes of persons employed in the economy and social services. Of course, the nominal growth of personal incomes has also subsequently brought about a new rise of prices, which was indispensable because of the influence of other factors on the rise of prices and because of the inappropriate economic policy and tax policy, which was

aimed at placing the entire burden of the interest on foreign credits on those employed in the economy and noneconomic activities.

Since none of the basic causes of inflation has been eliminated, there are no prospects that the rate of inflation will drop considerably this year. It can be said that there is even basis for a new acceleration. An additional influence toward higher prices this year will be exerted by the changes made in the manner of determination of gross income and income of economic organizations. This has to do with revaluation (higher prices) of inventories of raw materials and supplies, stocks of expendables, work in process, and finished goods, as well as the possibility of charging the current loss in 1985 to the revaluated value of inventories up to the amount of the difference between paid and unpaid interest on working capital and the difference between negative and positive exchange rate differences.

#### How High Are Real Personal Incomes

Net personal incomes paid out in the period of January-November of last year for all employees in the economy, social services, and government bodies, agencies, and organizations amounted to 2,660 billion dinars, which is 75 percent more than over the same period of 1984. Of that amount, about 2,070 billion dinars went to persons employed in the economy. The largest increase was in the total amount of net personal incomes paid to persons employed in the work communities of banks and financial organizations (92 percent) and persons employed in the work communities of bodies, agencies, and organizations of socio-political communities (81 percent).

#### Growth of the Total Amount of Personal Incomes Paid Out January-November 1985\*

<u>Republics and Provinces</u>	<u>Jan-Nov 85, Nominal</u>	<u>Jan-Nov 84, Real</u>
Yugoslavia	175	101.7
Bosnia-Hercegovina	176	102.9
Montenegro	177	104.1
Croatia	172	99.4
Macedonia	162	95.3
Slovenia	195	109.6
Serbia	171	100.6
Serbia proper	170	100.6
Kosovo	184	109.5
Vojvodina	169	97.1

\* The cost of living index for Yugoslavia and the republics and provinces pertains to the January-October period.

These figures suggest two conclusions: first, that the real personal income per employee did not in fact increase during the first 11 months of last year, since the 1.7-percent real growth in the total is offset by the increase in the number of persons employed in the economy and noneconomic activities, and second, there was a considerable differentiation of employed persons with

respect to the movement of the standard of living on a regional principle (in certain republics and provinces real personal incomes increased considerably, while they dropped in others).

The total amount of net personal incomes paid out experienced the largest nominal and real increase in Slovenia and Kosovo (nominally 95 and 84 percent, respectively, but in real terms approximately 10 percent in both cases). This difference between the nominal and real growth arose out of the differing rise in the standard of living. In Slovenia the standard of living has been increasing considerably faster than in Kosovo.

#### Dubious Cost of Living

Did real personal incomes actually increase last year? If we accept the accuracy of the statistics, it turns out that at least the total amount of net personal incomes paid out last year increased in real terms over 1984. We have no arguments to dispute the accuracy of the published figures pertaining to the cost of living for Yugoslavia and for the republics and provinces. Yet we will attempt on the basis of certain indirect data to express doubt about the published cost of living indexes.

Last year the social product (computed in permanent prices) remained at approximately the level achieved in 1984. This conclusion can be drawn on the basis of these figures: industrial output rose 2.7 percent, agricultural output dropped about 9 percent, and there was a drop in the volume of construction work and retail sales (in permanent prices).

The volume of industrial production last year increased 2.7 percent (4.8 percent in Bosnia-Hercegovina, 2.1 percent in Croatia, 3.2 percent in Macedonia, 1.2 percent in Slovenia, 2.8 percent in Serbia proper, 16.4 percent in Kosovo, and 0.3 percent in Vojvodina, while in Montenegro it dropped 0.1 percent). The smallest growth of industrial output (slightly less than 1 percent) was achieved in the production of consumer goods. Exports last year, calculated in 1984 prices, were up about 8 percent, while imports (calculated in the same prices) were at the 1984 level. It follows that the portion of the social product available for domestic consumption in 1985 was smaller than in 1984. As for consumer goods, relations were more unfavorable from the standpoint of the goods available for domestic consumption, since exports of these goods were up 6 percent in value terms, while imports were down 10 percent.

Figures on retail sales of goods are entirely consistent with this observation. That is, the real volume of commodity sales in the trade sector over the period January-November of last year was smaller than over the same period of 1984.

There was an invigoration of retail trade toward the end of last year. Sales in December were up 10 percent over November, which is slightly more than the rise of retail prices in December. It follows that December sales in permanent prices were higher than those of December 1984, and in this way the drop in the real volume of retail sales was mitigated, and it probably amounts to about 3 percent. This figure proves that total real consumption in the

country did not increase, but decreased. This is still not proof that real personal incomes of persons employed in the economy and social activities also decreased. That is, there might have been changes in real income of certain strata of the population so that a rise in the real income of employed persons might have required a manifold reduction of the real incomes of other categories of the population. Such a trend is not realistic, since almost nothing has happened which might have had an essential influence on Yugoslavia's social composition. One other alternative is possible, an increase in personal savings. According to the figures, there was no real increase in savings either. It follows that the suspicion about the figures on the cost of living and real personal incomes is not groundless.

#### Retail Commodity Sales and Inventories, index numbers

<u>Republics and Provinces</u>	<u>Sales Jan-Nov 85</u>		<u>Inventories</u>
	<u>Nominal</u>	<u>Real</u>	<u>Dec 85</u>
Yugoslavia	166	95	163
Bosnia-Hercegovina	169	95	176
Montenegro	158	92	153
Croatia	160	91	162
Macedonia	161	94	179
Slovenia	178	99	167
Serbia	166	96	156
Serbia proper	169	99	151
Kosovo	162	93	184
Vojvodina	160	90	160

#### Net Personal Income Per Worker

<u>Republics and Provinces</u>	<u>Amount</u>		<u>Index Numbers: Yu-goslav Average = 100</u>	
	<u>Average</u>	<u>Jan-Oct 85</u>	<u>Average</u>	<u>Jan-Oct 85</u>
Yugoslavia	37,740	51,179	100	100
Bosnia-Hercegovina	34,607	45,049	92	88
Montenegro	30,025	38,307	80	75
Croatia	40,464	55,281	107	108
Macedonia	27,563	36,376	73	71
Slovenia	50,256	69,508	133	136
Serbia	35,205	48,013	93	94
Serbia proper	35,190	48,209	93	94
Kosovo	29,153	38,183	77	75
Vojvodina	37,170	50,656	98	99

#### Regional and Sectoral Differences

The nominal rise of personal incomes last year was not uniform either from region to region or from sector to sector. Existing differences increased considerably. The rule was this: In parts of the country where personal incomes

were already higher than the average the increase was above average, and where they were lower, the increase was smaller than the average; in activities and branches where personal incomes were higher than average, the increase was also greater than the average percentage, and in industries where they were lower, the increase was also smaller. This means that existing differences in the level of average personal incomes are both regionally and sectorally correlated. This, of course, need not be a negative attribute. As for the regional differences, their further increase is the result of the economics of business operation, since as a rule republics with higher personal incomes also have the smallest losses and relatively largest accumulation.

In Slovenia personal incomes increased the most, and this trend is continuing. Industrial output in Slovenia rose only 1.2 percent, considerably less than the average for Yugoslavia. The financial results of business operation of the Slovenian economy were still the most favorable; the losses were the smallest in relative terms, and accumulation was the largest in relative terms. This only proves how outdated are the dogmatic conceptions of those who measure the business performance of the economy in the physical volume of production. But even the closed Yugoslav market has made it possible for the advantage of the Slovenian economy to be manifested to that extent.

The picture of the production, personal incomes, and consumption in Kosovo is interesting. There, industrial output showed the largest increase (16.4 percent), the total amount of personal incomes paid out increased in both nominal and real terms only slightly less than the growth achieved in Slovenia, but retail sales fell off 7 percent in real terms, while inventories of goods in the trade sector at the end of the year showed the largest nominal increase (84 percent). Does this mean that the number of consumers in Kosovo has decreased essentially?

The figures on the trade sector also prove that sectoral differences in the level of personal incomes are increasing. The average net personal income paid out last October in Yugoslavia's retail trade sector was 9 percent less than the average for the country's economy. In wholesale trade it was 14 percent higher than that average, and in foreign trade it was all of 81 percent higher. In Slovenia the relations follow the same pattern, but at a considerably higher level: The average personal income in the retail trade sector was 23 percent higher than the average for the country's economy [sic], in wholesale trade 47 percent greater, and in foreign trade all of 117 percent greater. The average personal income in retail trade stood in a ratio of 1:2 (63 in Kosovo and 123 in Slovenia), and the average personal income in foreign trade exceeded that spread (94 in Kosovo and 217 in Slovenia). This indicates that intersector differences are mostly a consequence of the business efficiency of individual work organizations and that those differences largely coincide with regional differences. This, of course, does not mean that certain activities do not have special or indeed even monopoly advantages thanks to privileges distributed by the government on the closed market, and they certainly should be done away with.

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ECONOMY

YUGOSLAVIA

TRADE INSPECTORATE THWARTED BY LOCAL AUTHORITIES

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 15-17 Feb 86 p 5

[Interview with Pavel Dolenc, chief federal market inspector, by Vera Soti:  
"Tete-a-Tete Behind Closed Doors"; date and place not given]

[Text] When disturbances occur on the market, the eyes of the public are turned toward the market inspectorates. They are expected to react, even before irregularities occur, to prevent as far as possible any crimes from recurring, often in more serious form than the consumer can accept.

Bright tones cannot be used to color our market situation. Which means that the inspectorates also have more work and more obligations. This was one of the occasions for us to talk about the tasks of the inspectorate with Pavel Dolenc, chief federal market inspector. We were especially interested in the detection of violations of the unified Yugoslav market and abuse of the practice of concluding agreements on prices.

"At the very beginning of this year it seems that the psychological factor has been influencing prices, since in many sectors we have observed a virtual rush toward higher prices," Pavel Dolenc said at the beginning of the interview.  
"The Bureau of Prices has been trying to maintain an upper limit of 45 percent on the annual rate of inflation, but what happened in January and is happening in February will make it difficult to maintain that figure."

[Question] Are there any new things or special tasks for market inspectorates in the measures which have just been adopted for holding prices back?

[Answer] Our obligations of monitoring prices and the market and especially of reporting violators to the commercial banks have been in effect since 1983. There are no innovations in the new decision except the greater legal security of offenders. Credit will be withheld from organizations which violate price regulations, which maintain excessively large inventories until prices go up on the goods, which take advantage of a monopoly position or which violate regulations on mandatory purchases. Refusal of credit is in any case the measure which hurts the economy the worst. There are now cases when even without a formal charge from the inspectorate organizations revoke their previous decision, since refusal of credit is an extremely heavy penalty for them. It is obvious that earlier the economy did not feel that its existence was threatened, but now it is practically impossible to do business without credit.

### "Comfortable" Coverage for Their Violations

[Question] What assessment can be made of the market situation at the beginning of the year on the basis of inspectorate findings?

[Answer] During January the inspectorates ran 9,708 checks. They established unlawfully acquired property gain in the value of 145 million dinars, and goods worth more than 87 million dinars were taken off the market. In January 29 criminal charges were filed, 270 charges for economic violations, and more than 1,000 were sent to judges for misdemeanors, 11 charges before courts of honor, but not a single charge was filed with the banks to refuse credit. This seems to be related to the effort to persuade organizations not to violate regulations, but it also shows that there was formal coverage for many of the price rises that were carried out.

[Question] One of the essential areas in which results are expected from inspectorates is violation of the unity of the Yugoslav market. Yet experience demonstrates that last year, for example, not a single charge was filed. What is the principal obstacle?

[Answer] First, there is a point we need to clear up. Namely, we are not always dealing with willful behavior on the part of work organizations, since they have "comfortable" coverage of the respective government structure for their violations. Economic entities cannot on their own partition off the market without certain support. In other words, the exclusiveness is a consequence of certain acts and actions by bodies and agencies and communities, and as a formal matter the violations cannot be detected. There are no written traces of support for the exclusiveness, everything is done tete-a-tete, by telephone.... We would establish violations of this kind if they were set down in regulations, in general self-management acts, or in any individual "papers." Only one case was detected last year in connection with wheat purchases, when one opstina guaranteed even in writing a higher price than the purchase price, thus committing a violation and engaging in a kind of speculation.

[Question] Does there also exist a certain organizational interference with the inspectorates that keeps them from dealing more effectively with exclusiveness or monopolistic behavior?

[Answer] The inspectorates are dependent--financially and organizationally--on the opstina (above all) leadership. This, thus, extends to interopstina, city, republic, and provincial inspectorates. Regulations, it is true, do declare the independence of market inspectors, no one may put pressure on them, but the inspector's real status is different. The lower their position, if we can put it that way, the more bound up they are with the opstinas, the less independence they have. It is somewhat different with interopstina or city communities. In the federal inspectorate there are no partial interests in the sense that someone could influence the inspectorate out of the interests of a republic or province. But differing interests do occur in opstinas and indeed in the republics and provinces.

## How the Market Is Suspended

Most frequently there is "protection" of the organizations from their own community, especially when it comes to competition from outside. How the inspector reacts to these things depends, of course, on him. We give them moral support to keep from giving in, but if they cave in, we do not know about it. However, when they oppose the local powers-that-be we do not know it either, they do not inform us except in unofficial contacts when chicanery is also mentioned. So little is officially known about this. Pressure on inspectorates is possible because of the organization itself, they are financed by the republics, provinces, and opstinas. So, whoever has the money can also influence the results of the effort.

[Question] There are those who think that price agreements are also used very frequently to achieve a monopoly position.

[Answer] One can see from the reports of the Federal Bureau for Prices whether producers of the same products are agreeing on prices in associations and communities. It would not be comprehensible for 100 producers of the same or similar goods to submit an application for a price rise at almost the same time or report a price rise to the bureau if they did not have agreements to that effect. It is obvious that in such cases we are dealing with the kind of agreement on prices that is prohibited under the Law on Social Price Controls. The market is supposed to influence the price, and prices of goods are not to be raised in a meeting of producers of the same goods. In such situations the producers reach agreement, but they adapt the price to the poorest organization, since this suits everyone, and the domestic market still accepts everything. The good side is that the prices are mainly uniform, regardless of where the goods are produced or sold. But market criteria are evaded in this way, and for all practical purposes the market does not exist.

[Question] How do inspectorates react in such situations?

[Answer] In several cases we have reacted, but there were no written traces of the agreements, the participants protected one another. The Federal Market Inspectorate ought to expose these cases, since others will not do so and cannot do so. When the question of higher coffee prices came up, for example, there was written evidence, and we were able to react immediately.

At present the only indicator we have is when all producers simultaneously come before the Federal Bureau for Prices, and all the rest is done privately. We could act against these violations by seeking statements from suspected participants in monopoly agreements, but I am afraid that our inspectorates are not yet capable of that.

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MILITARY

BULGARIA

ARMY DAILY CALLS FOR EXECUTION OF PARTY DECISIONS

Sofia NARODNA ARMIYA in Bulgarian 6 Feb 86 p 1

[Leading article: "Party Decision Law for Every Communist"]

[Text] At first glance the party organization with Captain Uchkov as secretary is operating well--plans and records are in order; members' dues are regularly accounted for; at meetings long-term decisions are made. . . But only at first glance. For when it comes to execution of these long-term decisions, a number of weaknesses in the activity of the party committee and party bureaus stand out. They are embodied primarily in the organizational work to execute the projected measures and in first-hand practical activity.

The grounds for uneasiness are serious, for our party requires the activity of every organization and of every communist to be evaluated according to real achievements and results, and this means making the evaluation after the party decisions are executed. For nothing is so disappointing and so shakes one's faith as hasty and incompletely executed decisions.

A party organization's decision is first-rate when it is an act of collective mind and efforts, when in it are accumulated the will and unity of all the communists. It is herein that one can tell the organization's ability to discover in good time the problems confronting the collective, make a political analysis of the situation, and on this basis choose the most appropriate ways and means of action.

The discussion and working out of the future decision call for a creative and calm setting. The decision cannot result in the desired effect without discussion, conflict of opinions and the enrichment and concretization of what is proposed or without the participation of all party members.

Some communists have acquired the habit of readily raising their hand for any draft decision, thinking privately that "the leadership will justify itself later." A number of secretaries most often saddle themselves with the difficult task of formulating and preparing party decisions with target dates and persons in charge. But this, in its turn, not infrequently diverts the decision from being addressed precisely to the person best suited to execute it. A subjective approach of this kind not infrequently gives rise to general hortatory wishes which have no real effect and do not contribute, to the necessary

extent, to the elevation of combat readiness and military and political training or the strengthening of discipline.

Now more than ever party leadership must approach this activity from scientific perspectives and without fail respect and implement the principle of collective leadership.

But however good a party decision may be, unless it is converted into action and leads to final constructive results, it remains merely a piece of paper. The main thing is organizational and political work for its execution.

Whereas in decision-making the observance of collectivity is mandatory, in the execution of decisions individual responsibility comes to the fore. Any party member receiving an assignment to execute a party decision must regard it as a supreme behest and be personally responsible for its fate. It is no secret that when the time comes to report on the execution of decisions, some communists like to hide behind the collective or behind the party leadership and find "weighty" objective reasons to justify their own passivity. There is one party measure towards them today--severe and uncompromising exactions. For nonexecution of a decision or half-way implementation thereof is in fact a flagrant violation of the party statutes and the standards of party life.

The times require every party secretary and all party leaders to give a clear answer to the question: How many communists can be called to task for nonexecution of party decisions. It is now more than imperative that the party organization establish a strict procedure for feedback on the progress and quality of execution. Written questionnaires, protracted thumbing through records and reports, etc., do not always help in this activity. It is in the collective where real life in its entirety can be observed every day that personal contact and first-hand assistance must be looked for. Party bureaus can be made accountable for some decisions; for others, monitoring and assistance will come from the party secretary or members of the leadership. Entry of a report in a journal, notebook or card file and input into a computer also give a clear idea of the progress and quality of the execution of party decisions.

The part played by the party meeting as a collective agency for verifying and evaluating the execution of decisions that have been made is decisive. Increasingly firmer positions are being assumed in practice by such forms and means at the party meeting as reporting on decisions made earlier, including evaluation of their execution in a special item on the agenda, hearing of reports and self-reports of communists and entire groups, etc. There is one aim: Not a single decision that is made is to remain unchecked and unacted upon by the party.

The execution of decisions must always be accompanied by active ideological-and-educational and mass-political work. This is especially imperative when the decisions apply to all communists or to the entire military collective. This is a guarantee of a still closer link between the party organization and the collective, of a more all-round accomplishment of the organization's educational and mobilizing functions, and elevation of its authority.

An important place in the campaign for the execution of party decisions is allotted to political organizers and party committees, which are called upon not only to direct the active party membership towards more effective ways of working, but also to give a personal example themselves of 100-percent execution of their own decisions. Thus, every party decision not only will transform the practical world, but will also actively contribute to the conversion of the primary party organization into the archetype and political nucleus of the military collective.

The report-and-election meetings in the army party organizations are over. And the party conferences are near their end. At these the communists have adopted thorough and long-term decisions and resolutions incorporating concrete and purposeful actions for heightening the combat readiness of units and for worthily greeting the 13th Congress of the Bulgarian Communist Party. Army party organizations must now launch wide-scale and highly effective activity for the fulfillment of assignments and for decisively raising the quality of military labor.

A party decision is law for every communist. This is a behest of the times in which we work and live. This is also an indispensable condition for achieving high results in the strengthening of discipline and combat-training activity, as well as in the communist inculcation of soldiers.

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MILITARY

BULGARIA

SOFIA GARRISON COMMANDER GENERAL SALTIROV DWELLS ON DISCIPLINE

Sofia NARODNA ARMIYA in Bulgarian 11 Feb 86 p 2

[Interview with capital garrison commandant Maj Gen Petur Saltirov, on occasion of eve of 13th BCP Conference, by Engr-Col Veselin Stoyanov; date and place not specified: "It Is an Honor and a Responsibility to Wear the Military Uniform--A Comprehensive Approach to Discipline"]

[Text] Officers, noncommissioned officers and soldiers walk about the capital . . . Citizens follow them with attentive glances, seeing in them representatives of the Armed Forces of the Bulgarian People's Republic, valiant defenders of our socialist homeland. It is an honor and a responsibility to wear the military uniform, which symbolizes valor and loyalty to our military and revolutionary traditions.

The people have a picture of the serviceman as a model of discipline and neatness. Our people rightly call the army a school of bravery, industry and high conduct. Good examples along these lines are innumerable. At the same time, we may encounter on the boulevards and streets servicemen who are not notable for their irreproachable conduct or their impeccable external appearance. In this connection a representative of the editors met and talked with the capital garrison commandant, Maj Gen Petur Saltirov. . .

[Question] Comrade Major General, the part played by the Capital Military Commandant's Office in maintaining order and discipline among service personnel in public places is great. But we sometimes hear individual comrades mention that the garrison commandant's patrols are too strict. What do you think in this connection?

[Answer] The manners and conduct of servicemen in public places and their neatness are of great importance for order and discipline in garrison. Whenever we assess the state thereof, we must proceed from the premise of the great contribution made by our socialist culture to the formation of a number of virtues in the conduct of the citizens in our society as a whole. This, of course, favorably affects the conduct of servicemen as well.

Moreover, the questions of external appearance and neatness, of civilized manners and conduct of servicemen have a deep-rooted tradition. On them are made the precisely defined demands of the military statutes, the observance of which

is constantly checked not only by commanders and chiefs, but also by the commandant's agencies. Soldiers wear the uniform as a symbol of honor and nobility, of bravery and gallantry, and their conduct in public places is an expression of the degree of their esthetic inculcation and manners.

Characteristic of the overwhelming majority of servicemen are such standards of conduct as politeness, courtesy, tact, honesty, modesty, etc. The manifestation of these traits in everyday life objectively reflects the results of the inculcative process in the army and elicits our people's well-founded respect for soldiers.

But guided by the well-known doctrine that checking is the highest degree of confidence, as well as by the requirements of the military statutes, we pay special attention to the training of, and the performance of service by the commandant's patrols. We assign as members thereof servicemen who are disciplined, exacting and neat in soldierly respects. On this score we have made some significant progress. Officers Genov, Kavaldzhiev, Goranov, Atanasov, Stankov, Modev and Sergeants Boev, Andonov, Gelev. etc. perform patrol service as patrol chiefs in exemplary fashion.

Thus, for example, Officer Genov always presents an exemplary external appearance when he goes on detail. While on duty, he displays exceptionally high stringency towards violators of garrison order and discipline. In a frank conversation he importuned that he does not measure his job by the distance covered or the length of time on patrol, but by the irregularities corrected in the conduct and neatness of the servicemen he encounters while on duty. Master Sergeant Andonov's experience is likewise favorable. As patrol chief, he is attentive and courteous, but uncompromisingly exacting towards violators.

At the same time I want to note that a significant portion of the violations of discipline that occur in garrison results from the excessively low demands made by some commanders and chiefs and from certain departures from statutory requirements. If the officials concerned conscientiously fulfilled their duties, no slovenly serviceman could leave the barracks.

In final analysis I can say that the commandant's patrols are not too strict. We anticipate raising their stringency even further in order to raise discipline in the capital garrison to the level of high party requirements.

[Question] What is your personal attitude towards so-called "trivialities" in the wearing of the uniform?

[Answer] Uniform requirements are set by regulations approved by the minister of national defense. Any departure from these requirements is a violation. We know that "military discipline is the strict and precise observance of the requirements of the statutes and regulations. . ." Therefore there are no important and unimportant requirements, hence no "trivialities." Any departure from the statutes is a violation, and any violation that occurs must be dealt with with the specified stringency.

[Question] The statutes say that seniors in military rank have the right to criticize and censure juniors in the event of a violation of military discipline and public order. How many times so far have you observed such cases?

[Answer] I have repeatedly seen seniors in rank applying this requirement of the regulations, mostly in the event of a violation of public order or of the rules governing the wearing of the military uniform, as well as in the event of nonobservance of military courtesy. For example, I can cite Officers Vasilev, Grozev, Detistov, Mladenov, Lukanov, Tsolov, etc. I might give examples of noncommissioned officers. But the right accorded by the statute to senior servicemen has not become a rule in the conduct of all garrison servicemen, which is a sign of indifference and irresponsibility towards the state of discipline. In some cases the answer is that when they stop a junior to reprove him, he passes by without paying any attention to the reprimand addressed to him. True, there are such service personnel and we are exceptionally severe in dealing with them. In our preventive work with commanders and chiefs we direct exceptional attention to this question.

[Question] Party requirements for the further strengthening of discipline apply to everybody. Is there, in your opinion, a difference between the approach of servicemen working in the commandant's office and those assigned to duty detail by garrison units?

[Answer] I can definitely say that missions involving order and discipline are accepted with understanding and a sense of high responsibility not only by those working in the commandant's office but also by those assigned to duty detail by army units. To be sure, there is a known difference in the final result, but it is due to the greater experience and higher criteria of the service personnel from the commandant's office.

In the interest of truth, some officers and noncommissioned officers of units do take an unconscientious attitude towards their official duties, displaying too little stringency. There have been isolated cases when patrol chiefs have not arrested or reprimanded a single serviceman during an entire day. Such, for example, are Officers Dimitrov and Grigorov and Sergeants Grigorov and Yanev. We take serious measures against such comrades, removing them from the makeup of groups for garrison detail and sending letters to their commanders with a request to take up their attitude towards discipline with the entire officer and noncommissioned-officer personnel. With less experienced personnel we conduct joint performance of patrol service for 2 or 3 hours together with a representative of the commandant's office in order to show them whether there are violations in the region where they are on duty.

Mass information media have a tremendous opportunity to publicize and gain recognition for the example of the best military collectives and a number of officers, noncommissioned officers and men in strictly maintaining the prescribed service routine and discipline. But sometimes, even though reduced to a minimum, there are still on the pages of the military press and on the television screen some deviations from statutory requirements governing servicemen's conduct, neatness and external appearance. In this regard, too, we are undertaking, projecting and carrying out measures such as talk sessions with

the editors-in-chief of the military publications, with some press photographers and cameramen under the military editors, as a result of which violations of this kind have significantly decreased. . .

The leadership of the garrison, the Military Commandant's office of the Capital and VAI [military motor-vehicle inspectorate] agencies well understand what still has to be done so that discipline will measure up to the high party requirements and the tasks set by the minister of national defense. On the eve of the 13th Party Congress we will continue to improve our work style and methods, diversify our ways of checking and increase our stringency in the struggle against negative phenomena and behavior.

6474

CSO: 2200/77

MILITARY

HUNGARY

BIO ON PEOPLE'S ARMY AIR CORPS CHIEF JOZSEF SZABO

Budapest NEPHADSEREG in Hungarian 11 Jan 86 p 10

[Interview with Major General Dr Jozsef Szabo by Bela Siklosi: "Diploma of the Air Corps Chief"]

[Excerpts] This is how Major General Dr Jozsef Szabo reminisced about the more significant stations of his professional military career.

"My father was a miller. We moved often. I was 10 years old when the city of Karcag became the next station of our migration. This is where they enrolled me in the local highschool.

On 1 November 1947 I enlisted at the Kossuth Academy. I could hardly have thought of flying at that time since the Hungarian Armed Forces actually only had airplanes for show pieces and the first flying class at the Academy was started only towards the end of the year. Ten of us were accepted out of 90 applicants. By the summer we were in camp and began flight training on hastily overhauled Bucker-Bestman training planes. These were two-seater, easy to operate biplanes. We had three such machines. At that time this was what the Hungarian "air force" consisted of. And still that summer in July without an instructor I completed my first solo flight."

After the young officer's graduation, he became group leader of the third wing of the independent flight regiment's second squadron in Kecskemet. From that time on, events picked up pace. Hardly one year later, he was studying at the Soviet Air Force Academy. This was where he familiarized himself with the MIG-15 subsonic fighter plane. But after his return home he was not assigned to the air corps but rather was assigned as chief instructor at the flight department of the Zrinyi Miklos Military Academy. Even one year did not pass, when in the fall of 1956, he was assigned to be the deputy head of the National Air Force Headquarters training department. Here he again had the opportunity to continue flying. But this time the counterrevolution interrupted his career. On the 9th of November, he took up arms to defend the worker-peasant rule together with many hundreds of his fellow communist officers.

After the March consolidation he was ordered to report to the Ministry of Defense. His assignment was to reorganize the ranks of the air force,

to start up training. Later he became deputy commander of the Flight Training Center. While still in his youth, he trained and taught hundreds of young navigators the science of flying. He earned the title of first class navigator in the fall of 1959. He spent one year in the Ministry of Defense, then he was assigned as flight chief of a higher echelon air defense unit being formed. He was in a brief training course in the Soviet Union. On 14 April 1961 he flew for the first time without instructor in a MIG-21 fighter plane.

The experience Major General Szabo gained at the higher echelon flying unit was needed at a different post again. He was assigned to the chiefs of staff, and in the area of developing the flight teams and directing their battle training he became an active participant in the rapid growth of the country's air force in recent years. He worked for many years at the Flight Headquarters of the Hungarian People's Armed Forces.

He abandoned active flying in 1973 for health reasons. Though this meant somewhat of a break in his life, this was not felt in his work. He actively participated in creating flying team units. He did significant theoretical work in developing the system of requirements in pilot battle training. He studied on the job to defend his doctoral dissertation in which he worked out the methods of modern serial warfare. He studied the science of space travel with special interest until fate brought him in contact with astronautics again for the second time. The calendar was in the last days of year 1976.

"We travelled to Moscow to participate in the Intercosmos conference of the Academy of Sciences. Academician Alexandrov's statement took us all by surprise. According to this, the countries participating in Intercosmos may also send space travellers on trips in space. We were pleased to announce the great opportunity here at home and the commission created for this purpose, of which I was also a member, immediately began the work. The decisive selection criterium was that only those fliers could be selected for as candidates who could fly without restrictions. Those interested could complete on a voluntary basis. Needless to say that those who were in this group all volunteered for space flight. The rest is well known. This is how, after much work, preparation and study, the great mission and successful return of Bertalan Farkas, our country's first space traveller, came about. I was privileged to be present at both the take-off and the landing, and was able to congratulate my fellow pilot. Even now space travel provides the involved experts, including myself, with much work interpreting the research results."

The next significant station of his life's career came in 1983 when he was appointed Air Corps Chief of the Hungarian People's Army. He is a tireless spokesman for Hungarian military aviation, and our populous group of pilots. As member of the presidium of the pilots federation, he considers recreational flying and pilot training his personal cause. For the general, every hour and every minute of the day is filled with a multitude of tasks. He has precious little time left for his family and for personal matters.

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MILITARY

POLAND

PROGRAM, PURPOSES OF WROCLAW SECONDARY MILITARY SCHOOL.

Warsaw RZECZEPOSPOLITA in Polish 30 Dec 85 p 3

[Article by Andrzej Jurczynski: "I Want to be a Soldier... Students in Navy Blue Uniforms"]

[Text] The inscription located at the entrance to 106 Obernicki Street, Wroclaw, reads: Secondary Liberal Education Military School. We find ourselves in one of three schools of this type in our country, bearing a mathematical-physical profile, which began educational-training activities in September of this year.

Andrzej Wlodarczyk, superintendent of education and training in Wroclaw, states that the Polish community has undertaken various types of activities within the framework of national action for aid to schools. We regard as particularly valuable recent initiatives by our armed forces to create secondary liberal education military schools. The objective is the development of high level educational-training activities in the secondary school. This likewise pertains to achievements in patriotic-defense training, which we shall communicate to other schools in the province.

I Solemnly Swear

In an interview with Lt Col Antoni Slowik, MA, director of the Wroclaw Secondary School, we learn that the educational program is the same as in other schools, that 190 boys are enrolled in the initial classes, and that the Secondary School enjoys the sponsorship of the Officers' School of Army Engineers. Buildings comprising the boarding school and the educational section were adapted to satisfy those functions by soldiers of the Slask Military District. The Slask Military District also satisfied all the needs of the educational facility associated with supplying cabinets, laboratories, classrooms and a boarding school. During the solemn inauguration of the school year, Brig Gen Jozef Petruk, second in command of the Slask Military District in matters of regional defense, distributed student identity cards to the boys.

It was precisely at that moment that the students took the oath: "I, a student of the military secondary school, being faithful to the progressive and military traditions of the nation, do solemnly swear: to be honest, conscientious and friendly; to be a disciplined and diligent student; to pay due respect to older persons, teachers and instructors; mutually create the school's good name and authority by displaying exemplary conduct; to develop in myself the virtues of an honorable citizen; to serve my fatherland--People's Poland, with daily, persevering study and work."

Repair work on the class section and two buildings of the boarding school is still underway, and is being conducted by the soldiers. However, the work is so organized as not to interfere with the normal function of the secondary school. Lessons are being held in the classrooms.

#### Teachers' Opinions

Marjanna Kalota, a mathematics teacher for the past 14 years, commented, "The students are well equipped. Each one, for example, has a calculator. In our secondary school, mathematics is a leading subject with an expansive program. Students come from all over Poland, and represent a very diversified level of knowledge. They are not yet prepared for independent work. I devote much attention to adjusting the level of knowledge. The mathematics circle and the friendly mutual-aid organization play a large role in this area."

Ryszard Kolodziej, a physics teacher for the past 18 years: "... and I would like to stress the very fine supply of the means of instruction and technological equipment. We have even a dozen or so of microcomputers. I do not have to explain how important this is not only for the physicist. The results of compensating occupations are already apparent."

Urszula Pachocka, a history teacher and secretary of the Basal Party Organization [POP]: "Two hours of history weekly as anticipated in the school program is surely too little. This likewise pertains to other secondary schools with a similar profile, technical and vocational secondary schools. In connection with the limited amount of program hours, great significance is attached to extracurricular work, and particularly to activities of the historical circle and cooperation with the library. We are organizing trips to places designated as national memorials, and recently we met with Jerzy Tyslewicz, a veteran of the Polish People's Army. Not long ago I also proposed to the students an introduction to the annals of our city. All of these extracurricular undertakings are correlated with the program of the boarding school's work."

Maj Stanislaw Wamposzyc, scoutmaster and assistant director in matters of defense-training: "We recently had interesting meetings with students from Greece and a group of Palestinians. In the near future we shall be hosts to the Kurds. The Society for Polish-Soviet Friendship [TPPR] circle and

three circles of the Polish Tourist Countrylovers Association [PTTK] are functioning actively. We have two scouting teams, sailing and tourist. In the school sporting sphere, the following divisions are prominent: handball, basketball, volleyball, light athletics, swimming, judo, marksmanship and chess. Many members combine spheres of interest -- photography, the fine arts, plaster of Paris, computer science. Students often go to the movies, theater, opera. We have already established contact with the neighboring cooking school and the medical school. We continue to strive for attractive and useful organization of spare time."

Next comes a long break -- lunch time. Everything is already prepared in a clean, spacious cafeteria. Przemyslaw Wisniewski, Artur Belz and Robert Atlas prepared the tables on which milk and buns are served. The first boarding students arrive. Some reach for a bun and leave without even glancing at the hot milk. Their explanation: cream soup for breakfast and milk for lunch... However, the majority empty their glasses heartily. Lt Col Stanislaw Kowalski then escorts us through the boarding school. In the club room, the motto: "The fatherland is our great common responsibility," is alongside the secondary school students' oath. Among items of interest to the circles is a large scale display of materials devoted to Kotlina Kladzka, gathered during the last trip. We enter one of the rooms: three beds, cabinets, tables with lamps, a wardrobe. Clean and pleasant. We inspect rooms devoted to the different spheres of interest -- order prevails. Only in the music room was there some evidence of artistic disorder.

#### To Become an Officer

We interview Dariuss Palka and Krzysztof Piatkiewicz, students who came to Wroclaw from Gubin. They met and struck up a friendship at the secondary school. Krzysztof had problems with mathematics. He even received poor marks in solving variables. However, thanks to his friend, he has now improved.

We are together, says Darek Torchala, chairman of the Polish Socialist Youth Union School Board, and this unifies us. We have gained a footing and constitute a strong entity. Our youth organization, although its membership consists of one-half of the students, it includes all of them in its activities. We organize discotheques, trips, but we are also engaged in serious matters.

Students from the military secondary school can be recognized on the streets of Wroclaw by their navy blue sailor type uniforms. For every day, they wear elegant suits made of a durable fabric. They make a very good appearance.

There is great interest in studies and school. Recently, there were several candidates for one opening. During the current year there were 72 letters from outside of Wroclaw requesting information about the boarding

school. The eighth-grade students of the four Wroclaw schools have already become acquainted with the living and study conditions, having observed everything personally.

One more question at the conclusion of our visit to the school: Why did you select a military secondary school? This was the subject of the first study in the Polish language. Here are a few of the opinions taken from those studies:

Dariusz Dabiesz: "It was my dream to become an officer. I am content with my selection of a school."

Jozef Kowalczyk: "I would like to become a professional soldier. Upon completing secondary school, I will be accepted by a choice military officers' school without an examination."

Jacek Wojtczak: "My grandfather and father both wore soldiers' uniforms."

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POLITICS

GERMAN DEMOCRATIC REPUBLIC

EXTENDED SUPPORT FOR TOP-NOTCH ACADEMICS URGED

East Berlin SONNTAG in German Vol 40 No 5, 2 Feb 86 p 7

[Interview with Dr Karl-Heinz Zieris, faculty member of the Central Institute for University-Level Education: "Do Professors Have to Get Support?", conducted by Ilse Ziegenhagen, date and place not specified]

[Text] [Question] The GDR needs more top-notch achievements in science, and that is not possible without academics with a high international standing. You talked with academics from 224 universities and colleges and analyzed their ways of life to find out the conditions under which universities and colleges are able to produce top performances, and how support for academics must be organized. Before going into the results of your analysis, we must clarify who belongs to the circle of top-notch academics.

[Answer] Because it is difficult to establish concretely what a top-notch performer in science is, we are guided by the notion that our standards must in no way be too low. Self-tailored standards are as much out of place here as everywhere else. On the other hand, our standards must, of course, be realistic. One-in-a-hundred-year talents are rare. Applying the accomplishments of a Marx or Einstein as standard would cut the ground from under our conscious support for top performers. We can only strive for the highest international level. Top-notch performers are academics who are internationally well-recognized and whose contributions to the current state of scientific development in their area of expertise transcend local and national borders. It has nothing to do with discrimination if, with such a standard, we don't include all professors, not even all good professors in the group of top performers.. By the same token, not every outstanding young academic is potentially a top-notch performer.

There are many good and very good academics between the top and the middle. As I understand it, when we talk of a top-notch performer, we think about a relatively small circle of persons. Some years ago, some leading academics estimated that, in a good group of young academics, some 10 to 15 percent are highly gifted. The tendency is to apply the concept of what constitutes a top-notch academic rather generously, which hurts our efforts to obtain special support for extraordinarily gifted academics.

[Question] Top performances, of course, depend on research and a research subject that permits the exploration of a new scientific area. Experience

has shown that nowadays these are frequently subjects that stretch across several disciplines. Of course, the university is primarily a teaching institution. Training students has priority. Teaching and doing research--is there any way they can be combined?

[Answer] I can answer that by an emphatic "yes." As a matter of fact, there is sufficient proof of that from university professors who enjoy a high international reputation as scientists. We favor the unity of teaching and research. We require every professor to teach and to do research. This principle also applies to our top academics. In some capitalistic countries, teaching and research activities are shared by several persons. Of course, we could move top personnel out of teaching, but teaching stimulates research. That's the important point. But then, the students, too, have a right to be taught by particularly original thinkers. Almost all academics I interviewed said that they wouldn't want to do without research. Among the 224, there were only a very few who preferred to exclusively teach because they couldn't handle the twofold responsibility of teaching and doing research. Most need to teach.

Teaching forces them to generalize. In lectures and seminars, one has to express clearly what, until then, may have been fuzzy thinking. To develop a scientific point of view in front of students in a convincing way, that is a challenge, also for researchers. It leads to new perspectives and insights for one's own research.

[Question] You talked about the beneficial effect of teaching on research. But there are also negative effects; for instance, when a young academic who is capable of first-rate performance, is too busy with second-rate seminars, or when an established academic spends all his time lecturing and is losing his leading international standing.

[Answer] The reverse can happen if a professor has hardly time for serious research. Consistent support must be provided. The positive effect of teaching does not come automatically. There are some people who continue to disagree with conscious support for top performers, who maintain that talent asserts itself and that gifted people don't need any help in finding their way. That is a misconception. It is based on the assumption that only the weak need support. Of course, assigning a creative young scientist for years to teach a second-rank seminar without giving him any lectures, that destroys the enriching impact of teaching. The type of teaching must be influenced by an intelligent--and I emphasize--consistent style of guidance. For these people the subjects they teach must be carefully selected and the time they spend on teaching must be limited. Training top academics for research requires measures that are neither necessary nor possible for most of our university professors.

[Question] Should top scientists be required to accept management functions?

[Answer] We believe in the principle that science is managed by scientists. The question is whether it is absolutely necessary for the top researchers to do the managing. On that, our views differ. I believe that we have enough

good scientists in our country who can do an excellent job in managing. They don't necessarily have to be the few top-ranking researchers. Of course, ranking every professor among the top group won't work. To do so would leave only a few weak senior assistants to do the managing. As I said earlier, we have many very good professors who don't do any work at the top international research level, but who perform socially extremely significant work that is important to operate a university. The demand "special conditions for special accomplishments in research" is in no way a moral judgment: it is simply based on the force of circumstances. At the university as everywhere else, there are a large diversity of management functions. I don't believe top academics should and could be free of all managing. They should accept management functions in their own research collective and in bodies working on issues affecting research. It is important to free them from functions requiring a great deal of administrative, organizational work. Among the persons I interviewed, there were many section chiefs, projectors and also some rectors were leading academics. But that's not an argument for me. If these academics didn't have administrative duties but could do research, what they could accomplish!

[Question] Support for the gifted has to start early. Meanwhile, that has become clear to everybody and there is general agreement on that. Parental accomplishments, the influence of friends, the intellectual micro-climate so-to-speak, today they are seen as decisive forces which shape the life of the individual. It is less commonly accepted that support of the gifted continues to be necessary after the studies have been completed.

[Answer] "Support has to be cut off at some point!" This is the position that is frequently expressed with regard to extended support for top-notch academics after they have finished their studies. Thus far, there has been far too little consistent selection of, and support for, the young generation of academics. Development of top-notch professors is, above all, a question of making a conscious distinction between the large majority of young academics and the small group of persons who will be among the leaders in the foreseeable future. This is the very point where practice has frequently come to a halt and there is fear of the consequences. Last year, during a meeting in Dresden concerning the new generation of scientists, comrade Hoernig, director of the Central Committee's science division, emphasized that more attention must be paid to extended support for the most creative ones among our young scientists. Comrade Hoernig said, "Support of the best is in demand not only among the students."

The goal of increasing the performance level of all academics requires that unjustified differences are minimized and conscious differentiation is made in order to support the best. Under socialism, supporting the gifted is really nothing else but taking into consideration, as individual advantages, the exceptional qualities of the individual and the degree of his specific talents. Despite this deeply humanistic and democratic character of support for the gifted, which has absolutely nothing to do with bourgeois theories and practices of educating the elite, long-term ideological work will still be necessary to create a climate among all participants--managers and management at all levels, scientific work collectives, and particularly among university

professors and the new generation of academics--that not only tolerates, but actively supports special assistance for special talents. Even a number of the academics who were interviewed expressed reservations when we talked with them about a larger differentiation between the best young scientists and the large majority of research students, research assistants and assistants, or about a similar differentiation among university professors. The higher up one gets on the professional ladder, the greater evidently is the reluctance to accept such differentiations and to draw practical conclusions from them. However, making everybody equal prevents any serious support for the best. This is the point in which the ideological problems of support for the gifted culminate. We must treat the valuable intellectual potential of our country with greater care.

7821

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POLITICS

ROMANIA

DECREE ON NATIONAL, LOCAL COUNCILS FOR SCIENCE, EDUCATION

Bucharest BULETINUL OFICIAL in Romanian Part I No 83, 31 Dec 85 pp 1-6

[Council of State Decree No 439]

[Text] DECREE OF THE COUNCIL OF STATE  
on Organization and Operation of the National Council of Education and Science and the Councils of Science and Education of the Districts and the City of Bucharest

The Council of State of the Socialist Republic of Romania hereby decrees the following.

CHAPTER I

General Provisions

Article 1. The National Council of Science and Education, a party and state organ, has the mission of ensuring uniform implementation of party and state policy in the spheres of science, technology, and education, with the aim of promoting technical and scientific progress in all sectors of economic and social life, developing and improving education at all levels, training personnel, and carrying out revolutionary communist education of youth, in accordance with the objectives of the Program of the Romanian Communist Party for fashioning a comprehensively developed socialist society and moving Romania forward toward communism.

Article 2. The National Council of Science and Education is organized and operates as a deliberative body, broadly representative in character, which conducts its activities under the direct guidance of the Central Committee of the Romanian Communist Party and the Council of Ministers.

Article 3. The National Council of Science and Education provides management, guidance, and control of all activities in the spheres of scientific and technological research and of education.

Article 4. The National Council of Science and Education ensures mobilization of the entire scientific and technical potential of scientific research and technological engineering units, scientists, scientific research workers, technological engineers, teacher cadres, and research-development and production specialists, for the purpose of reaching the objectives and targets established in the Directive Program for scientific research,

technological development, and introduction of technical progress and the principal directions of development of science and technology in the Socialist Republic of Romania.

In the sphere of education, the National Council of Science and Education ensures attainment of the basic objectives of education relating to comprehensive training of cadres needed in all sectors of activity, closely coordinated with the production of material and intellectual wealth, to the molding, education, and preparation of the younger generation for life, to ongoing improvement in vocational, technical, and scientific training of workers, and to elevation of the general level of culture and knowledge of the people.

Article 5. The National Council of Science and Education must orient scientific research and educational activities so that they will outpace the objectives and requirements of development of society specified in the party program, five-year plans, and long-term forecasts and will ensure the promotion of original creative work and drawing upon the progressive traditions of Romanian education, science, and engineering.

Article 6. The National Council of Science and Education ensures improvement in vocational education and recycling of scientific research and technological engineering personnel and teacher cadres and contributes to their education in the revolutionary spirit of patriotism and socialist humanism, for the purpose of molding the new man, the builder of socialism and communism.

Article 7. The National Council of Science and Education ensures increase in the contribution made by the scientists, research workers, and teacher cadres of the Socialist Republic of Romania to the efforts exerted throughout the world to advance science and education and ongoing broadening of the exchange of values; it promotes scientific and technical cooperation with other countries, strives to increase the contribution made by Romanian science and education to enrichment of the universal storehouse of science, technology, and culture, and develops cooperative relationships with scientists and cultural and educational figures throughout the world in the struggle for disarmament and peace.

Article 8. The National Council of Science and Education also functions as a section of the Supreme Council of Economic and Social Development in the sphere of science, technology, environmental protection, and education.

## CHAPTER II

### Functions

#### SECTION 1

##### Functions in the Area of Scientific Research, Technological Development, and Introduction of Technical Progress

Article 9. The National Council of Science and Education directs, guides, and monitors all activity connected with scientific research, technological development, and introduction of technical progress, in order to reach the

fundamental objectives of socioeconomic development of the country, ensuring that chiefly the following will be accomplished by means of such activity.

- (a) Promotion of technical progress in all sectors of the national economy, advancement of the technical and scientific revolution, utilization of the most recent accomplishments of science, and introduction and extension of advanced technologies, mechanization and automation, and application of electronics, robotics, and cybernetics in production processes.
  - (b) Full implementation of the energy program and elaboration of new solutions leading to increase in energy production, utilization of non-conventional sources, discovery and exploitation of new resources, lowering of consumption, and recovery and re-use of energy in all sectors of activity.
  - (c) Elaboration of new solutions and technologies contributing to discovery and exploitation of new raw materials and energy resources, and expansion of geological prospecting to discover new reserves of useful mineral substances.
  - (d) Implementation of programs for superior utilization of raw materials and intermediate products, creation of new materials, improvement of existing technologies and elaboration of new technologies leading to increase in the degree of utilization of raw materials and to lowering of consumption of materials and energy.
  - (e) Implementation of the plan for introduction of technical progress, ensuring completion of assignments relating to quality and efficiency of results obtained and to full utilization of such results in practical applications and in the life of society.
  - (f) Design and development of machinery, equipment, and installations characterized by high performance and high productivity and ensuring substantial reduction of consumption of materials and energy and of the physical effort required of laborers.
- The design, official approval, and introduction into production of machinery, equipment, and installations which do not ensure higher output than existing equipment, lower production costs, and a high level of competitiveness of products in export are prohibited.
- (g) Steadfast promotion in all economic sectors of standardization of products, structures, and technologies; restriction of the number of basic types to the absolute minimum and specification of the fields of application of these types; manufacture of products of modular design, structural unification of elements and subassemblies, all products, and production lines and installations; application of standards guaranteeing constant improvement in the engineering and quality parameters of products.
  - (h) Large-scale application of work output rating of consumption, with the aim of increasing the degree of utilization of materials and energy resources and of ensuring ongoing reduction of the consumption of raw materials, intermediate products, fuels, and energy.

(i) Official approval and practical application of the technologies developed and the products created, as well as patenting of the results obtained as provided by law.

(j) Analysis of proposals for imports of raw materials, products, technologies, and licenses; their approval or rejection, depending on their suitability and the potential for their use in Romania.

(k) Performance of functions relating to the development of agriculture and accomplishment of the new agrarian revolution; achievement of higher yields of cereals and industrial crops; creation of new plant varieties and hybrids of high production potential and with high resistance to inclement weather; genetic improvement in livestock breeds and creation of new species ensuring higher production; counteracting deterioration of the soil and increasing soil fertility and productive capacity.

(l) Improvement in application of the new economic and financial mechanism, worker self-management and self-administration, the socialist principles of labor and distribution, organization, planning, and management of economic activities.

(m) Improvement in economic activities in industry, agriculture, and all sectors of the national economy, for the purpose of promoting new solutions to bring about better organization of labor and production, lowering of production costs, and consumption of materials and energy; increase in the profitability and efficiency of all economic activities.

(n) Implementation of the provisions of the program for improving the material and spiritual welfare of the workers and the quality of life of the entire people, increasing and diversifying the production of consumer goods, improving the state of health of the public, and preventing pollution and preserving the quality of the environment.

(o) More intensive development of long-term research in all fields of human knowledge, in order to open up new horizons to applied research and to augment the contribution made by science to the general progress of the country and to enrichment of the treasury of universal scientific thought.

(p) Reduction of the time taken up by the cycle of research, development, and production, through prompt application of the results of research in production and effective participation by research and development personnel until the established parameters have been reached.

(r) Achievement of integration of scientific research activities with education and production; close linking of science to practical and public activities.

Article 10. The National Council of Science and Education is responsible for planning and organization of the activities of scientific research, technological development, and introduction of technical progress, for which purpose it performs the following.

(a) It draws up long-term forecasts in connection with the activities of scientific research, technological development, and introduction of technical

progress, and prepares programs relating to the orientation and principal directions of scientific and technological development.

(b) It discusses the draft plan for scientific research, technological development, and introduction of technical progress (which is a section of the unified national plan for social and economic development of Romania) and takes measures to ensure full implementation of this plan.

(c) It elaborates and discusses the drafts of special programs for development of individual sectors, as well as draft programs affecting several sectors, for the purpose of solving the complex problems that arise in the process of socioeconomic development of the country; elaborates research programs in the sphere of recovery and recycling of reusable material resources.

(d) It establishes measures for improvement in organization of the activities of scientific research, technological development, and introduction of technical progress, and for improvement in the content and increase in the efficiency of these activities.

(e) It analyzes personnel needs of individual sectors and areas for scientific research and technological development activities and makes recommendations for sensible manpower distribution in these activities.

(f) It establishes measures for securing and achieving efficient use of the equipment and materials resources of scientific research activities, in keeping with the requirements for socioeconomic development of the country.

(g) It draws up programs for improvement in vocational and political-ideological training, and for recycling of personnel in scientific research activities, and establishes measures for the implementation of these programs.

(h) It monitors implementation of party and state resolutions in the sphere of scientific research and introduction of technical progress by the National Committee for Science and Technology, other ministries and central authorities, and by the people's councils of the districts and of the City of Bucharest.

## SECTION 2

### Functions in the Sphere of Education

Article 11. The National Council of Science and Education directs, guides, and monitors the entire instructional and educational process in education at all levels, thereby ensuring that the following will be accomplished.

(a) A high level of vocational, technical, and scientific training and general culture; multiple-skill qualification and broad specialty training of school pupils and students, for the purpose of their immediate integration upon graduation into the production process and into public activities and of adapting them rapidly to the changes that take place in engineering and technology in all sectors.

(b) Thorough assimilation by pupils and students of the policy and ideology of the Romanian Communist Party, its revolutionary theory, and the dialectical materialist and historical conception of the world and life.

(c) Education and training of pupils and students for work and life; cultivation of love of country, party and people, and the past struggle of the Romanian people for national and social liberty; molding the younger generation in a revolutionary spirit, so that it will be fully aware of the responsibility assigned to this generation in society, in work, and in the struggle for building a new socialist and communist society, for defense of the revolutionary achievements of the people and the independence and sovereignty of the country;

(d) Promotion of the collective spirit of mutual aid, justice, love of truth, honor, modesty, and propriety, of respect for the resolutions of the party, the laws of the country, and the norms of socialist ethics and fairness.

(e) Achievement of integration of education with scientific research and production, closer linking of the entire educational process to practical, economic, and public activities.

Article 12. The National Council of Science and Education is responsible for planning and organization of instructional and educational activities in all educational units, for which purpose it performs the following.

(a) It discusses the draft program for provision of manpower, development of education, and ongoing improvement in personnel training (a section of the unified national plan for social and economic development of the country) and makes certain that this program is implemented.

(b) It discusses programs for constant improvement in the content and organization of education at all levels.

(c) It elaborates programs for improvement in vocational and political-ideological training, as well as recycling of personnel in education, and establishes measures for the implementation of these programs.

(d) It analyzes the activities conducted for training and enhancement of the qualifications of teacher personnel and proposes measures for rational utilization and distribution of such personnel over the entire country.

(e) It monitors implementation of party and state resolutions in the sphere of education by the Ministry of Education, other ministries and central authorities, and the people's councils of districts and of the City of Bucharest.

(f) It monitors the organization and conduct of on-the-job training of pupils and students, in accordance with needs for training qualified personnel for the national economy and for the purpose of assimilation of the knowledge and skills needed for efficient exercise of future professions.

(g) It establishes measures for procurement and efficient use of equipment and materials resources for activities in education, as a function of the requirements of socioeconomic development of the country.

(h) It makes certain that recruitment and assignment of manpower in scientific research and educational activities are carried out in accordance with the provisions of the unified national plan and in keeping with the provisions of research programs and the personnel requirement for education at all levels.

### SECTION 3

#### Other Functions

Article 13. The National Council of Science and Education also performs the following functions in the sphere of scientific research and education.

- (a) It monitors implementation of party resolutions and the laws of the country in the sphere of science and education.
- (b) It monitors completion of assignments in plans and programs in the sphere of scientific research and education by ministries and other central authorities and by research and educational units.
- (c) It monitors utilization of the funds, equipment and material resources, and personnel of research and educational units by ministries and other central authorities.
- (d) It monitors organization and conduct of scientific and technical information and documentation activities and ensures ongoing improvement in the efficiency of such activities; approves the program of domestic scientific events that are of particular interest.
- (e) It establishes the forms and methods of international cooperation in the sphere of scientific research and education and ensures increase in the efficiency of the related activities.
- (f) It discusses the main drafts of laws and regulations relating to scientific research and educational activities at all levels.
- (g) It coordinates and guides all creative scientific and technical activities and activities for elevating and widening the horizon of scientific, technical, and cultural knowledge of the masses of workers.

### CHAPTER III

#### Organization and Operation

Article 14. The National Council of Science and Education is made up of scientists, scientific research workers, technological engineers, university professors, teachers and instructors, other teacher personnel in higher, elementary, gymnasium, lyceum, vocational, and foreman's education, other specialists and workers employed in production units and other sectors of economic and public life, and representatives of the National Council of Engineers and Technicians, the National Environmental Protection Council, the Union of Scientific Teacher Personnel Societies, the Association of Scientists, central party and state organs, and of mass and public organizations.

Article 15. The National Council of Science and Education is made up of 305 members.

The chairman of the National Council of Science and Education is an active member of the party and state leadership and a scientist, and is appointed by presidential decree.

The National Council of Science and Education also has two first deputy chairmen, four deputy chairmen, and two secretaries as members of its managing body.

The members of the National Council of Science and Education are nominated by the Congress of Science and Education and are appointed by presidential decree.

Article 16. The National Council of Science and Education is convened in plenary session once each year, or as many times as is required, by the chairman or at the request of one-third of the number of members of the council.

Article 17. The National Council of Science and Education conducts business when at least two-thirds of the number of its members are present, and passes resolution by open vote of a majority of the members of the council.

Representatives of state organs and public organizations may be invited to attend meetings of the National Council of Science and Education.

Article 18. Resolutions passed by the National Council of Science and Education are binding upon the National Committee for Science and Technology and the Ministry of Education, and also on other ministries and central and local authorities performing functions in the sphere of scientific research and education.

Article 19. The National Council of Science and Education is responsible, jointly and severally, to the Central Committee of the Romanian Communist Party for all activities of the council; each member is responsible to the council and to its chairman for performance of the tasks assigned to him.

Article 20. Routine collective management during the intervals between plenary sessions of the National Council of Science and Education is provided by the managing committee of the council made up of 35 members.

The chairman of the National Council of Science and Education is also the chairman of the managing committee of the council.

The composition of the managing committee of the council also includes two first deputy chairmen, four deputy chairmen, two secretaries, and 26 members.

The composition of the managing committee is approved by presidential decree.

The managing committee of the council organizes and is responsible for implementation of the resolutions of the National Council of Science and Education.

Article 21. The following special commissions are organized subordinate to the managing committee of the National Council of Science and Education to provide for conduct of activities.

#### Scientific Research Commissions

1. The commission for development of raw materials and intermediate product resources, power engineering resources, and new materials and energy sources.
2. The commission for introduction of technical progress, elevation of product quality level, and increase in labor productivity.
3. The commission for output rating of consumption and standardization.
4. The commission for planning and ensuring execution of scientific research activities, technological development, and growth of economic efficiency.

#### Educational Commissions

1. The commission for preschool, elementary, and gymnasium education.
2. The commission for lyceum, vocational, and foreman education.
3. The commission for higher education and advanced manpower training.
4. The commission for political educational activities.

The special commissions analyze, discuss, and take measures to ensure completion of the tasks assigned to them in the unified national plan for social and economic development of the country in connection with improvement of scientific research activities and development of education and educational-instructional and political-ideological activities.

Article 22. The mode of organization and operation of the special commissions and the composition of these commissions are established by the managing committee of the National Council of Science and Education.

Working groups of commission members and other specialists may be organized within the special commissions.

### CHAPTER IV

#### Councils of Science and Education of the Districts and the City of Bucharest

Article 23. Councils of science and education are organized in districts and the City of Bucharest, under the direction of the National Council of Science and Education, to coordinate scientific research and educational activities at the local level.

The councils of science and education of the districts and the City of Bucharest operate under the party committees of the districts and the City of Bucharest.

Article 24. The councils of science and education provide for unified management, guidance, and control of scientific research, technological development, and educational activities in the local administrative units in which they operate.

The councils of science and education analyze, discuss, and take measures to ensure attainment of the objectives and completion of the tasks assigned to scientific research and educational units in the unified national plan for social and economic development of the country, in programs for scientific research, technological development, and introduction of technical progress, and in programs for improvement in organization and development of education and for organic integration of education with scientific research and production.

Article 25. The councils of science and education of the districts and the City of Bucharest are responsible for implementation at the local level of the resolutions of the National Council of Science and Education and of the managing committee of this council.

Article 26. The councils of science and education perform the following principal functions in the sphere of scientific research.

- (a) They ensure and monitor completion of tasks in the plan for scientific research, technological development, and introduction of technical progress and in the special and multiple-sector programs assigned to the research and production units within the local administrative units in which they operate.
- (b) They take measures to ensure conduct of research which leads to development of raw materials and energy resources through discovery and exploitation of new sources of raw materials and intermediate products and new energy sources, increase in the degree of recovery and superior utilization of raw materials and intermediate products, development of new materials and technologies with superior characteristics, replacement of energy-intensive technologies, and involvement of reusable material resources of all categories in the economic cycle.
- (c) They establish measures for efficient implementation of the provisions of the program for introduction of technical progress, renovation and modernization of products, and improvement in product performance and quality parameters.
- (d) They are responsible for completion of product standardization and consumption work output rating programs.
- (e) They ensure performance of tasks relating to intensive development of agriculture, in accordance with the objectives of the new agrarian revolution, to obtain high, certain, and stable agricultural yields and to create new high-yield varieties of crops and breeds of livestock.
- (f) They monitor and take measures to ensure efficient use of the equipment and material resources of scientific research and technological engineering units.
- (g) They ensure integration of research with education and production.

(h) They establish measures for intensification of invention and innovation activities and for their application in production and public units.

(i) They organize and are responsible for implementation of programs for improvement in vocation and political-ideological training, and for recycling all personnel in scientific research activities.

Article 27. The councils of science and education have the following principal functions in the sphere of education.

(a) They make certain that the process of instruction and education in educational units at all levels is conducted in conformity with the approved educational plans and under the conditions provided by law.

(b) They take measures to make certain that the entire process of instruction and education of the younger generation is carried out on the basis of thorough knowledge and assimilation of the dialectical materialist and historical conception of the world and life and the revolutionary theory of the party.

(c) They ensure execution of measures connected with vocational, scientific, and technical training and elevation of the general level of culture of pupils and students.

(d) They are responsible for attainment of the objectives connected with comprehensive training of the personnel needed for all spheres of activity, with molding and education of the younger generation and preparation of this generation for work and life, training of a generation dedicated to country, party, and people, and with ongoing improvement in the vocational, technical, and scientific training of workers, in keeping with the latest accomplishments of science and technology and with the requirements for social and economic development of the country.

(e) They ensure accomplishment of integration of education with research and production.

(f) They analyze the results obtained in training and education of preschool children and pupils; establish measures for improvement in the activities conducted in educational units.

(g) They ensure the implementation of measures connected with on-the-job training of pupils and students and with mastery by them of the vocations in which they are trained.

(h) They take measures to provide the personnel required by educational units and to improve the professional and political-ideological training of such personnel.

(i) They monitor the school and vocational orientation activities conducted in educational units and ensure implementation of the scholarship plan and reporting to the jobs to which they are assigned by graduates who do not go on to higher education.

Article 28. The council of science and education is made up of 30 to 50 members appointed by the managing committee of the National Council of Science and Education.

The chairman of the council of science and education is a party and state activist.

The chairman is assisted by two deputy chairmen and one secretary.

Article 29. The council of science and education is convened in plenary session once a year, or as many times as is required, by the chairman or at the request of at least one-third of the number of members of the council.

The council conducts business when at least two-thirds of the number of its members are present and passes resolutions by open vote of a majority of the members making up the council.

To carry out guidance and control activities, the council may form working groups made up of its members, and may also employ other specialists to carry out these activities.

Article 30. The council of science and education is jointly and severally responsible to the National Council of Science and Education and to the district party committee or party committee of the City of Bucharest for all activities of the council; each member is responsible to the council and to its chairman for performance of the tasks assigned to him.

Article 31. Routine management of activities during intervals between sessions of the council of science and education is provided by an executive office made up of the chairman, two deputy chairmen, one secretary, and four to six members appointed by the council.

The chairman of the council of science and education is also the president of the executive office.

The executive office of the council ensures implementation of the resolutions of the council and performs the functions assigned by this body during the intervals between sessions of the council.

Article 32. Meetings of the executive office of the council of science and education are held monthly, or as often as is necessary, upon being convened by the president or at the request of at least one-third the number of its members.

The executive office conducts business when at least two-thirds of the number of its members are present and passes resolutions by open vote of a majority of the members making up the office.

Article 33. The executive office is jointly and severally responsible to the council of science and education for all activities of the office and to the district party committee or party committee of the City of Bucharest. Each member of the executive office is responsible to the office and to its president for performance of the tasks assigned to him.

## CHAPTER V

### Final Provisions

Article 34. Articles 17, 18, Paragraph 1, Articles 171, 176, and 177 of Law on Education No 28/1978, Decree No 150/1980 on organization and operation of the Superior Council of Education and of the educational councils of the districts and of the City of Bucharest, and any other conflicting provisions, are rescinded as of the date of this decree.

Article 35. Within a period of 30 days from the date of promulgation of this decree, the National Council of Science and Education will submit for approval draft decrees on organization and operation of the National Committee for Science and Technology and the Ministry of Education.

NICOLAE CEAUSESCU  
President of the  
Socialist Republic  
of Romania

Bucharest, 31 December 1985  
No 439

6115  
CSO: 2700/89

POLITICS

ROMANIA

MEMBERS OF NATIONAL COUNCIL FOR SCIENCE, EDUCATION

Bucharest BULETINUL OFICIAL in Romanian Part I No 83, 31 Dec 85 pp 7-15

[Presidential Decree No 288]

[Text] PRESIDENTIAL DECREE on Membership of the National Council of Science and Education and of the Managing Committee of the Council

The President of the Socialist Republic of Romania hereby decrees the following.

Sole article. The membership of the National Council of Science and Education and of the managing committee of the council as listed in the annex, which forms an integral part of this presidential decree, is hereby approved.

NICOLAE CEAUSESCU  
President of the  
Socialist Republic  
of Romania

Bucharest, 31 December 1985

ANNEX

MEMBERSHIP  
of the National Council of Science and Education and of the managing committee of the council

I. NATIONAL COUNCIL OF SCIENCE AND EDUCATION

CHAIRWOMAN

ELENA CEAUSESCU

FIRST DEPUTY CHAIRMEN

Ursu, Ion

First deputy chairman, National Committee for Science and Technology

Teoreanu, Ion

Minister of education

**DEPUTY CHAIRMEN**

Dobrescu, Emilian      Minister secretary of state, National Committee for Science and Technology  
Neculau, Viorica      Deputy Minister of Education  
Florescu, Mihail      Minister secretary of state, National Committee for Science and Technology  
Mihulecea, Cornel      Chairman, State Committee for Nuclear Energy

**SECRETARIES**

Floarea, Octavian      Secretary of state, Ministry of Education  
Laudoniu, Diamanta      Deputy chairwoman, National Committee for Science and Technology

**MEMBERS**

Aburel, Lucian      Director, Scientific Research and Technological Engineering Institute for Shipbuilding, Galati  
Agachi, Lucian      General school inspector, Bacau District  
Alexandrescu, Domnica      General school inspector, Prahova District  
Alboiae, Didina      Director, kindergarten of Roman Mechanical Enterprise, Neamt District  
Aldea, Gheorghe      Director, Research and Development Institute for Petroleum and Gas, Cimpina  
Andreescu, Dumitru      Director, Scientific Research and Technological Engineering Institute, Bucharest  
Andreescu, Nicolae      Director, Nuclear Power Reactor Institute, Pitesti  
Andreian, Cazacu-Cabiria      Professor, University of Bucharest  
Andrunache, Emilia      Secretary for propaganda problems, Galati District Committee of the PCR [Romanian Communist Party]  
Ardelean, Alexandrina      Secretary for economic problems, Iasi District Committee of the PCR  
Ardeleanu, Florica      Laboratory chief, Energy Research and Modernization Institute, Bucharest  
Anghel, Gheorghe      Director, National Institute of Information and Documentation

Anghel, Lucretia	Laboratory chief, Scientific Research and Technological Engineering Institute for Electronics, Bucharest
Ani, Matei	Chairman, Council of the Union of Associations of Communist Students of Romania, secretary, Central Committee, Union of Communist Youth
Anton, Ion	Professor, Timisoara Polytechnic Institute
Antonescu, Magdalena	Director, Industrial Lyceum No 4, Ploiesti, Prahova District
Antonovici, Vasile	Director, Scientific Research and Technological Engineering Institute for Mining Equipment and Hoisting Machinery, Timisoara
Arseni, Constantin	President, Academy of Medical Sciences
Arisanu, Ion	Deputy director, Institute of Animal Biology and Nutrition, Balotesti
Aromanesei, Alexandru	Director, Scientific Research and Technological Engineering Institute for Railroad Cars, Arad
Arnautu, Maria	Director, Industrial Lyceum No 8, Rimnicu Vilcea, Vilcea District
Atanasiu Draga	Scientific secretary, Central Institute for the Electrical Engineering Industry, Bucharest
Babiciu, Pavel	Director, Scientific Research and Technological Engineering Institute for Agricultural Machinery and Equipment, Baneasa-Bucharest
Babos, Ion	Director, Technological Engineering and Development Institute for the Electrical Engineering Industry, Bucharest
Badea, Ion	Chairman, National Water Resources Council
Badea, Minodora	Teacher, General School No 3, Drobeta-Turnu Severin, Mehedinți District
Balaci, Alexandru	Professor, University of Bucharest
Bancu, Gheorghe	Rector, Institute of Medicine and Pharmacy, Tîrgu Mureș
Barbu, Viorel	Rector, University of Iasi
Barbu, Maria	Teacher, deputy director, General School No 18, Craiova, Dolj District

Barna, Septimiu	Director, Technological Research and Development Institute for Glass and Fine Ceramics, Bucharest
Baciucu, Lazar	Secretary for propaganda problems, Botosani District Committee of the PCR
Badila, Elena-Maria	General school inspector, Giurgiu District
Badilita, Luminita	Deputy director, 23 August Industrial Lyceum, Bucharest
Balan, Dodu-Ion	Professor, University of Bucharest
Balu, Pia	Director, Research Center for Aluminum Technology, Slatina
Barbulescu, Elena	General school inspector, Olt District
Barbulescu, Nicolae	Deputy Minister of the Chemical Industry
Bejan, Georgeta	Director, General School No 5, Constanta
Beldie, Cameluta	Rector, Iasi Polytechnic Institute
Bercia, Iosif	Director, Institute of Geology and Geophysics, Bucharest
Bistriceanu, Victoria	Secretary general for propaganda problems, Dolj District Committee of the PCR
Bilbie, Vlad	Director, Cantacuzino Institute, Bucharest
Birca, Cristian	Director, Scientific Research and Technological Engineering Institute for Electrical Engineering, Bucharest
Bizu, Victor	Director, Research Apparatus and Equipment Enterprise, Bucharest
Blagau, Georgeta	Director, Lipova Industrial Lyceum, Arad District
Bobeica, Natalia	Director, Kindergarten No 10, Comanesti, Bacau District
Boboc, Nicu	General director, Central Institute of Mathematics
Boiangiu, Maria	Design engineer, Rolling Mill Department and Plant Design Institute, Bucharest
Bolog, Vasile	General school inspector, Timis District
Bondrea, Aurelian	Director, Directorate of Personnel, Education, Organization, and Control, Ministry of Education

Borhan, Gheorghe	Director, Research and Development Institute for the Cellulose and Paper Industry, Braila
Bozdoghina, Ana	Director, Kindergarten No 5, Sibiu
Bucur, Iuliana	General director, Wool Industry Central Agency, Bucharest
Bucureasa, Viorica	Teacher, General School No 6, Fagaras, Brasov District
Bucur, Maria	General school inspector, Arad District
Budai, Lucia	Deputy director, Industrial Lyceum No 6, Satu Mare
Bujgoi, Gheorghe	Director, Scientific Research, Technological Engineering, Research and Development, and Production Institute for the Inorganic Chemical and Non-Ferrous Metals Industry, Bucharest
Bunoiu, Iancu	General school inspector, Mehedinți District
Buracu, Mihail	General state inspector, General State Inspectorate for Product Quality Control
Buzescu, Ion	Director, National Heat Engine Institute, Bucharest
Catargiu, Irimie	Deputy minister of mines
Ceausescu, Zoia	Department head, Scientific Research and Technological Engineering Institute for Aviation, Bucharest
Ceausescu, Valentin	Scientific secretary, Institute of Nuclear Physics and Engineering, Magurele-Bucharest
Cebuc, Maria	Secretary for propaganda problems, Brasov District Committee of the PCR
Chiriac, Florea	Rector, Institute of Construction, Bucharest
Chirila, Calin	Director, Scientific Research and Technological Engineering Institute for Passenger Automobiles, Colibasi-Pitesti
Chiru, Gica	Secretary for propaganda problems, Dimbovita District Committee of the PCR
Chivu, Vasilica	Scientific secretary, Central Institute of Heavy Equipment, Bucharest
Ciocirlea, Ioana	Scientific secretary, Scientific Research and Technological Engineering Institute for Mechanical Equipment, Bucharest

Cojocaru, George	Director, Technological Design Institute for Light Industry, Bucharest
Colesnicencu, Ileana	Secretary for propaganda problems, Tulcea District Committee of the PCR
Comsa, Natali	Profesor, Blaj Teacher's Lyceum, Alba District
Constantinescu, Ion	Minister secretary of state, State Planning Committee
Cornea, Felicia	Professor, Bucharest Polytechnic Institute
Condrea, Elena	General school inspector, Vaslui District
Condurache, Ion	Director, Motru Industrial Lyceum, Gorj District
Cornea, Stefan	Director, Manufacturing Research and Development Center for Iron and Steel Products, Hunedoara
Coteanu, Ion	Director, Institute of Linguistics, Bucharest
Craiu, Corneliu	Director, Research and Development Center for Waste Water Treatment, Bucharest
Cretu, Aurelia	Professor, General School No 7, Dorohoi, Botosani District
Cristea, Maria	General School Inspector, Satu Mare District
Cristescu, Poliana	Chairwoman, National Council of the Pioneer Organization; secretary, central committee, Union of Communist Youth
Cristescu, Valeriu	Director general, Central Research and Development Institute in Construction, Bucharest
Calinoiu, Nicolae	Rector, Ciprian Porumbescu Conservatory, Bucharest
Catanoiu, Floarea	Deputy director, Industrial Lyceum No 3, Craiova, Dolj District
Cozma, Stefan	Deputy director, Research and Development Institute for Non-Ferrous Ores, Baia Mare
Czerwinski, Constanta	Secretary for propaganda problems, Ialomita District Committee of the PCR
Dabija, Mioara	Deputy director, Design Institute for Standardized Structures, Bucharest
Danciu, Maria	Director, Lyceum of Mathematics and Physics, Braila
Dan, Valentina	Prorector, Galati University

Decean, Constanta	General school inspector, Alba District
Dediu, Rodica	Director, General School No 10, Onesti, Bacau District
Degeratu, Cornelia	Director, Institute of Physical Medicine, Balneoclimatology, and Medical Recovery, Bucharest
De Sabata, Coleta	Rector, Timisoara Polytechnic Institute
Despoiu, Maria	Director, Rimnicu Sarat General School, Buzau District
Dinca, Gheorghe	Prorector, University of Bucharest
Dobrea, Virgil	Director, Study and Development Institute for Land Improvement, Bucharest
Dobre, Nicolae	Director, Directorate for Standardization and Work Output Rating of Consumption
Dobrescu, Viorica	General director, Industrial Central Agency of Plastic Processing, Bucharest
Doca, Ion	Director, Research Center for Chemical Fertilizers, Craiova
Dogaroiu, Emanoil	General school inspector, Braila District
Dragan, Iancu	Director, Institute of Metallurgical Research
Dragan, Ioan	Rector, Cluj-Napoca Polytechnic Institute
Draganescu, Vasile	Section chief, Institute of Physics and Radiative Equipment, Magurele-Bucharest
Draghici, Ecaterina	General school inspector, Vrancea District
Dragulin, Mircea	General director, Central Institute for Heavy Equipment, Bucharest
Dulama, Dan	Deputy Minister of the Metallurgical Industry
Dumitrescu, Cornelius	Rector, Institute of Architecture, Bucharest
Dumitrescu, Pompilia	Laboratory chief, Research, Technological Engineering, Planning and Design, and Production Institute for the Inorganic Chemical and Non-Ferrous Metals Industry
Dutu, Olga	General school inspector, Constanta District
Fejes, Iuliu	Sector chief, Central Council of Worker Control of Economic and Social Activities

Fica, Agripina	Deputy director, Institute of Leather Goods and Footwear Research, Bucharest
Fieroiu, Victoria	Laboratory chief, Chemical Research Institute, Bucharest
Filep, Ana	Director, Craciunesti General School, Mures District
Filer, Ionica	Director, Galati Industrial Lyceum
Fodor, Dumitru	Rector, Petrosani Institute of Mines
Fodor, Iosif	Director, Research and Development Institute for Non-Metallic Substances, Cluj-Napoca
Folea, Ion	Minister of Geology
Furo, Iuliu	Secretary of state, Ministry of Education
Gabra, Ilie	Secretary for propaganda problems, Covasna District Committee of the PCR
Gadea, Suzana	Chairwoman, Council of Culture and Socialist Education
Gagiu, Adriana-Cristina	General school inspector, Neamt District
Gavrilescu, Dan	Director, Technological Engineering and Development Institute for the Heavy Equipment Industry, Bucharest
Gavrilita, Lorica	Rector, Institute of Medicine and Pharmacy, Lasi
Georgescu, Elena	Director, Steagul Rosu Industrial Lyceum, Brasov
Georgescu, Emil	Director, Pesticide Research Institute, Bucharest
Georgian, Liliana	Chief research worker, Dr V. Babes Institute, Bucharest
Gheorghiade, Georgeta	Deputy director, Scientific Research and Technological Engineering Institute for Precision Mechanics and Tools, Bucharest
Ghinea, Dumitru	Director, Technological Engineering and Design Center for Machinebuilding, Bucharest
Ghise, Dumitru	Prorector, Stefan Gheorghiu Academy
Goiceanu, Elena	Director, General School No 139, Bucharest
Goidea, Dumitru	Deputy director, Research, Technological Engineering, and Design Institute for Refineries, Ploiesti

Gramaticu, Elena	Director, Industrial Lyceum No 2, Birlad, Vaslui District
Groza, Severian	Director, Petrosani Industrial Lyceum, Hunedoara District
Hagiescu, Silvia	Chief research worker, Institute of Research in Construction and Construction Economy, Bucharest
Haiduc, Maria	Chief research worker, Astronomy and Space Science Center, Magurele-Bucharest
Hatmanu, Dan	Rector, Iasi Music Conservatory
Heinrich, Alexandru	Deputy Minister of Equipment and Material Supply and Control of Fixed Capital Management
Hera, Cristian	Director, Research Institute for Cereals and Industrial Crops, Fundulea, Calarasi District
Hoza, Gavril	General school inspector, Bistrita-Nasaud District
Huidumac, Ion	General school inspector, Teleorman District
Ianculescu, Marian	Director, Institute of Forest Research and Management, Bucharest
Ignat, Domnica	Director, General School No 17, Oradea, Bihor District
Iliescu, Marin	Director, Directorate of Social Sciences and Educational and Athletic Activities, Ministry of Education
Imre, Magdalena	Director, Kindergarten No 2, Tirgu Secuiesc, Covasna District
Ionel, Adrian	Rector, Iasi Agronomic Institute
Ionescu, George	Rector, Cluj-Napoca Institute of Medicine and Pharmacy
Ionescu, Constantin	General Director, Romanian Standardization Institute
Ionescu, Maria	General Director, Central Institute of Chemistry
Ionescu, Reasilvia	Chief engineer, Research and Development Institute for Petroleum and Gas, Prahova District
Istratescu, Constanta	Chief research worker, Research and Development Institute for the Wood Industry, Bucharest
Isaroiu, Angela	Secretary for propaganda problems, Mures District Committee of the PCR

Ivan, Doina	General Director, Central Institute of Biology
Ivascu, Marin	General Director, Central Institute of Physics
Jinga, Ion	General school inspector of the City of Bucharest
Jinescu, Gheorghita	Dean, Faculty of Chemical Process Equipment and Engineering, Bucharest Polytechnic Institute
Jora, Costica	Director, Agroindustrial Lyceum, Insuratei, Braila District
Juncu, Octavian	Director, Scientific Research and Technological Engineering Institute for Electronics, Bucharest
Kolozsvary, Zoltan	Shop chief, Scientific Research and Technological Engineering Institute for Light Industry Machinery, Bucharest
Lascu, Gabriela	Deputy director, Institute of Nutritional Chemistry, Bucharest
Lazar, Rodica	Director, Industrial Lyceum No 2, Deva, Hunedoara District
Lazarescu, Mihaela	Section chief, Institute of Hydraulic Engineering Research, Bucharest
Lemne, Marioara	Chief research worker, Institute of Geology and Geophysics, Bucharest
Leustean, Floarea	Secretary for propaganda problems, Suceava District Committee of the PCR
Luca, Constantin	Director, Chemistry and Physics Center, Bucharest
Luca, Gheorghe	Deputy director, Institute of Hydraulic Power Engineering Research and Development, Bucharest
Luca, Sinica	Director, Cobadin Agroindustrial Lyceum, Constanta District
Lupescu, Lidia	Director, Trusesti Agroindustrial Lyceum, Botosani District
Maghiar, Teodor	Dean, Faculty of Technical Education, Assistant Engineer Institute, Oradea
Manitiu, Carol	General director, Central Institute for Machine-building
Marcu, Gheorghe	Director, Cluj-Napoca Institute of Chemistry

Marian, Anica	Chief research worker, Research and Technological Engineering Center, Fagaras Chemical Complex, Brasov District
Marinescu, Elena	Director, General School No 5, Oltenita, Calarasi District
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POLITICS

YUGOSLAVIA

'UNTRUTHS' REGARDING FORMATION OF MACEDONIAN CHURCH REFUTED

Belgrade BORBA in Serbo-Croatian 25-26 Jan 86 p 2

[Article by Dragan Nikolic in response to an interview with Dr Dragoljub Zivojinovic, dean of the School of Philosophy of Belgrade University, published in INTERVJU: "Who Does the Macedonian Church Belong to?"]

[Text] The statement by Dr Dragoljub Zivojinovic, dean of the School of Philosophy at Belgrade University, in the last issue of INTERVJU was perceived in Macedonia as a malicious falsehood, as was testified to and stated in the Republic Conference of the SAWPM a few days ago when the activity of religious communities in this republic was debated.

Above all, the "conflicts concerning the autocephalic nature of the Macedonian church" did not arise "in relation to the growing statehood of the republics" (as asserted by Dr Dragoljub Zivojinovic), but because the top leadership of the Serbian Orthodox Church (in opposition to the Serbian clergy) was not willing to recognize the right of Macedonian believers, in keeping with the decisions of their councils, to have their own church. Deprival of that right, on the pretext that church canons have to be respected (incidentally, they have been violated by all the Orthodox Churches when they made similar proclamations), is nothing other than contesting the natural right of believers, of a free people, who have freely expressed a desire to have their own church. It is only with canonicity that this opposition can be justified, but this is untenable in practice, as testified in its way by the history of Orthodoxy.

Zivojinovic's assessment that "separation of the Macedonian Orthodox Church from its parent church in Serbia diminished it in political and religious terms" is not accurate, but rather the purpose of failing to recognize it is to assign it such a place in spite of the fact that it has become a factor bringing together Macedonian believers in all latitudes (especially in overseas countries), which has among other things made it impossible for them to be recruited by certain churches who have been operating with manifestly anti-Macedonian and anti-Yugoslav programs. Incidentally, the Macedonian church communities in those countries have been playing a constructive role in nurturing Macedonian and Yugoslav patriotism and have been developing cooperation with the homeland.

It is very difficult to explain why this "amounts to carrying water for a pro-Bulgarian policy," as Zivojinovic supposes it to be.

"Republic statism" did not create, nor could it have created the Macedonian Orthodox Church, but neither did it have any reason to prohibit (with the police) the holding of the founding councils of Macedonian believers. This simply is the business of the believers themselves and their natural right. From the standpoint of Orthodoxy, in spite of the "desire of the Vatican to break up and weaken Orthodoxy," creation of the Macedonian Orthodox Church can play only a constructive role, since this puts an end to the anachronistic demands and quarrels of several Orthodox churches over the Macedonian believers all over the world. The aggressive things that occurred during the entire 19th century and indeed during this century did not strengthen Orthodoxy, but on the contrary this was a constant stumbling block in relations among its churches.

Nor is the assertion correct that only a universal council, held once every 1,000 years, could recognize the Macedonian Orthodox Church, nor that the "patriarch of the Serbian Orthodox Church can do nothing here," when we realize that such a council has not recognized virtually any of the existing Orthodox Churches. It is well known, however, that the Orthodox Churches would recognize the Macedonian Orthodox Church if it were recognized by the top leadership of the Serbian Orthodox Church. Recognition or nonrecognition of the Macedonian Orthodox Church by the top leadership of the Serbian Orthodox Church actually amounts to the universal council for the purposes of the Macedonian Orthodox Church.

However, the worst thing nevertheless in the statement of Dr Dragoljub Zivojinovic is that he is not sure how much this has to do with the Bulgarians and with a pro-Bulgarian orientation among certain people here, just as he is certain of the fact that such currents have not left the scene in our country. However, it might be said with certainty that that is a malicious insinuation belonging to the kind of propaganda that is still being spread only by those systems which have designs on Macedonia and on the right of the Macedonian people to exist as a free people.

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POLITICS

YUGOSLAVIA

CATHOLIC WEEKLY DENOUNCES ANTI-CHURCH ARTICLE IN BELGRADE PRESS

Zagreb GLAS KONCILA in Serbo-Croatian No 5, 2 Feb 86 p 5

[Editorial concerning an interview with Dr Dragoljub Zivojinovic published in INTERVJU on 17 January 1986: "Falsehoods Which Foment Enmity"]

[Text] In a time when very distinguished representatives of religious communities and the sociopolitical community in our country are seeking ways of mutual understanding and cooperation and are emphasizing with unconcealed satisfaction certain achievements of those efforts, just recently our public has been inundated from Belgrade by a wave of incredible falsehoods which arouse enmity and seem to frustrate in advance any mutual trust. We are referring to an interview which Dr Dragoljub Zivojinovic, full professor and acting dean in the School of Philosophy of Belgrade University, gave on 17 January of this year to the magazine INTERVJU. We have learned that he took his doctorate in the United States, that he is a specialist in World War I, and that in particular he has published books on the Vatican. In view of the stated scientific reputation his assertions ought to be the concern of a professional historian, but in view of what he actually wrote, it must provoke the conscience and good taste of the well-intentioned reader with an average education. That is, it is difficult to believe that the appearance of this article is accidental, that it was not deliberately and with very definite aims inserted into the moment in history mentioned above.

Fear of a Marxist-Catholic Dialogue

Dr Zivojinovic simply says that "in its ideology the Vatican is an enemy of socialism." What he is referring to here as ideology can only be Christianity, and the assertion that Christianity as such is an enemy of socialism truly does no credit to socialism. But is it any wonder that in the same article he should soon reproach Cardinal Gaspari, Vatican state secretary, for having demanded that the new state of Yugoslavia be a republic rather than a monarchy back in 1919, altogether in conformity with the programs of the Croatian Peasant Party and the Communist Party? And Zivojinovic attributes the downfall of the old Yugoslavia to the activity of the Comintern and the Vatican. Either we do not know how to read, or someone in this country truly would like at this precise moment to arouse enmity of broad strata both against Communists and against Catholics simultaneously, against the League of Communists and against the Catholic Church. It is a difficult attempt to understand, it would seem to be harmless, but it is not naive by any means.

### Who Benefits From Concordats?

It is interesting that Zivojinovic should portray that Vatican, which according to him is always malicious, as wanting to conclude concordats with Serbia and Montenegro, and then he admits that both Montenegro in the 1886 Concordat and the Kingdom of Serbia in the 1914 Concordat derived much more benefit than the Vatican did, since those concordats "pacified the Catholic elements of the annexed Montenegro," and "met with an extremely positive response among Catholics in the monarchy (Austro-Hungarian) who favored South Slav unification." That would mean that the Vatican was so "maliciously inclined" toward these Orthodox states in the Balkans that in concluding the concordats it was pacifying Catholics and bringing them to have trust in those states.

Without entering into all the lies which Zivojinovic tells about the political and economic relations between Serbs and Croats on our soil, we will dwell on the obvious falsehoods concerning the Catholic Church. We learn in this way that the first archbishop of Sarajevo Stadler was a "Jesuit," though everyone knows that Stadler did not belong to either the Jesuitic nor any other religious order.

### When Did Pious XII Live?

Zivojinovic says: "The culmination of Vatican and Viennese indisposition was in 1912 and 1913 during the Balkan wars when Pious XII called Serbia a 'savage and barbarian land which should be punished and forced to return everything it has taken.'" But who is there who does not know that Pious XII became pope only in [date illegible; actual date was 1939].

The distinguished professor goes on very "progressively," as we have already mentioned, in reproaching Cardinal Gaspari for having wanted the people to rule in the new state instead of a dynasty, and then he imagines that in 1928 "the pope sent a message to the clergy to undertake an offensive against the institutions of the state," as well as that business about the strange tie-up between the Comintern and the Vatican against the "Yugoslavia created at Versailles." It turns out that the Holy See was not so afraid of the spread of Stalinist Communism as it was desirous of causing harm to Serbia and Serbia was greatly threatened without its dynasty. He says that at that time the Communists and Catholics spread the falsehood about the hegemony of the Great Serbian bourgeoisie only in order to set our nationalities at odds.

### "Experimental Catholic State"

Then came World War II with all the misfortunes and bloody atrocities on our soil. Zivojinovic places in quotation marks, as though he were copying it from some well-known document, an alleged Vatican evaluation of those atrocities: "It is ugly, but useful! Amen!" Of course, no one in the ranks of the Catholic Church ever uttered anything of the kind, but present-day readers who believe such a thing will be able to quote Dr Zivojinovic, since why would they doubt the honesty of a scholar who even took his doctorate in America? Then we learn that Archbishop Alojzije Stepinac was a "gray eminence of Pavelic's Experimental Catholic State." That would make the NDH [Independent

State of Croatia] the "Experimental Catholic State"! Was it not entirely imbued with the influence of the Third Reich, in which atheistic Nazism was in power? Not even our bourgeois press published a portion of the Vatican documents from which one can very well see the tension that prevailed between the Ustasha leadership and our episcopate. It will take nothing more than the opening of the transcripts of the conferences of bishops held in Zagreb during the war to make this still more obvious: Just, God, do not allow those documents to get into the hands of specialists like Zivojinovic. After all, from somewhere he knows about the practice of burning documents. He says that "before his death Pope Pious XII burned all the important documents which compromised Vatican policy during his pontificate." If that is the same "Pious XII" who said such ugly things against Serbia back in 1913, then there is no problem, since a pope who at that time ruled for such a long time truly did not exist, and it would be clear that Zivojinovic is not writing history, but is fabricating myths to do service for hatred. But however that might be, in 2,000 years not a single piece of paper has been burned in the Vatican, but rather everything is jealously laid away in the archives. Without those Vatican archives there would be no science of history today, and there would be no such subject in which to get a doctorate.

#### Who Is the Catholic Primus in Yugoslavia?

Is there any need to enumerate the falsehoods in the remainder of that interview? When was it that Cardinal Casaroli admitted that "there had been serious mistakes" in Vatican policy toward Yugoslavia? In what year was the archbishop of Zagreb named "Catholic primus in Yugoslavia"? Is the professor unaware that in Yugoslavia there is only one Catholic primus, that his seat is in Bar, and that he is called the primus of Serbia?

We hear for the first time that the cathedral in Zagreb undertook certain quite important actions during the mass movement in 1971. It is much more important that Zivojinovic again says that the Catholics are ready to collaborate with the Communists, counting "on separation." The man is greatly afraid of a dialogue between Christians and Marxists in this country. But who is to believe him that that dialogue is headed "toward separation"? And one must unavoidably ask who and what was the target of that entire interview.

#### Invented Statistics

The professor's assertion "that before World War II there were 1.7 million Orthodox inhabitants in Croatia, while today there are only 700,000 of them" has nothing at all to do with the facts. What Croatia is it that he is talking about before World War II? About the Sava and coastal banates? About the Croatian Banate? Or perhaps he is thinking of the situation at that time in what is now SR Croatia? Where did he find those figures? He asserts a falsehood which easily becomes a slogan and arouses enmity. According to him, the Vatican was even involved during the unrest in Kosovo. According to him, the Vatican is inciting even the Muslims, and especially the Macedonian Orthodox Church. Anyone who has ever been against the hegemony of the Great Serb ruling stratum (since no intelligent person attributes that hegemony to the Serbian people) is in cahoots with the Vatican according to Zivojinovic.

## The Autocephalic Nature of the Orthodox Churches

In speaking about the independence of the Macedonian Orthodox Church, which according to him is a "need for Macedonian republic statism" and serves a pro-Bulgarian policy and certainly the intense desire of the Vatican to break up Orthodoxy, Professor Zivojinovic again displays his immense ignorance. He says that recognition of the Macedonian Orthodox Church is practically impossible, since only "a universal council can officially recognize a church's autocephalic status," and that "church councils in the Orthodox Church are held once every 1,000 years." It is no mean trick to cram so much ignorance in so few lines. Indeed, the last universal church council recognized by Orthodoxy was the Second Nicean Council in 787 (the year 7 in the ecumenical calendar). Slightly more than 1,000 years have passed since that time. But before that the Orthodox Church and the Catholic West regularly held such councils in 325, 381, 431, 451, 553, and 680. By that logic the Serbian Orthodox Church--which was born only in the 13th century, and was organized in its present form only after World War II--would not be autocephalic at all in the spirit of Orthodox Church legislation!

## "Gulag" or Pluralism?

Ultimately we learn from Zivojinovic that there are progressive theologians among the Catholic priests in Croatia; "however, their ideas are being smothered by repressive measures, their human rights have been smothered." The church, he says, "is persecuting them, sending them to isolated monasteries, to out-of-the-way villages," and "there are entire Catholic gulags for dissident intellectuals in monks' habits all over the world and indeed even in Croatia." Here the professor's imagination has truly surpassed all bounds. That is, it is well known that certain newsmen in the bourgeois press persistently tried to proclaim some of our theologians to be church dissidents, and Zivojinovic is probably referring to them. However, it is also well known that those Croat priests, theologians, who have had or who still have certain problems with the hierarchy, administrative and organizational problems, not doctrinal ones, have not been expelled from our church. Not only are they authorized every day to celebrate mass, to preach, and take confession in their episcopates, but many of them sit in important chairs of our theological seminaries at the university level, and some of them even carry on the strongest Catholic publishing activity in the country and on commission from the episcopates prepare publications of official church documents and prayer books for worship.

The falsehoods in Zivojinovic's interview are more than obvious; that makes it still more important to wonder about the intentions. After all, he says that nothing happens by accident. Will those responsible discover that this interview is a case of very dangerous inflaming of ethnic and religious enmity as well as of a grave injury to the state of the Holy See, with which the SFRY has diplomatic and friendly relations?

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SOCIOLOGY

GERMAN DEMOCRATIC REPUBLIC

COMBINE LEADERS GUILTY IN FISCAL MANIPULATION

East Berlin NEUE JUSTIZ in German Vol 40 No 2, Feb 86 pp 68-69

[Article by Dr Guenter Wolf, Public Prosecutor of Schwerin bezirk:  
"General Supervision of Legality by the Public Prosecutor"]

[Text] Articles 2, 3, 4, 6 of VO [ordinance] on planning, formation and use of the cultural and social fund for state enterprises of 3 June 1982 (GBI I No 24 p 427); articles 4, 6 of AO [order] on planning, formation and use of the bonus fund of state enterprises of 14 April 1983 (GBI I No 11 p 121); articles 16, 18, 25 of the ordinance on financing guidelines for state industry of 14 April 1983 (GBI I No 11 p 110).

On the responsibility of enterprises in dealing with funds earmarked for a purpose, which include funds for measures to improve working and living conditions of the workers.

Protest by the public prosecutor of Schwerin bezirk of 6 May 1985 - 113 - 47 - 85.

Within the framework of reviewing a report (article 95 of the Code of Criminal Procedures) in which state control organs also participated, it was ascertained that in the state combine E., resources from the cultural and social fund, the bonus fund and the investment fund had been used contrary to law. Decisions were made and measures taken which are contrary to managerial responsibility regarding planning and use of the resources.

Under article 31 of the Public Prosecutors Law, the bezirk public prosecutor lodged a protest with the combine director.

Excerpts from the argument:

The use of corporate funds in the reproduction process of state enterprises according to plan and geared toward greatest effectiveness is an essential prerequisite for the continuous fulfillment and surpassing of production targets, and thus a decisive condition for further successful realization of the economic strategy of the SED.

Safeguarding this responsibility by the combine director and his leadership cadres demands, among other things, constant control based on legal

requirements over the process of planning and use of the resources allocated to these funds.

This was not carried out in the state combine E. during the period from the second half of 1984 to the beginning of 1985. On the basis of sometimes spontaneous or coincidental managerial decisions and a procurement system under totally inadequate control and coordination, considerable sums were misused from the cultural and social fund, the investment and bonus funds. This represents a disregard for legal requirements and runs counter to the goal of planned continued improvement of working and living conditions for the combine's work collectives. This procedure also cannot be reconciled with the demands for socialist economizing, the exemplary effect of leaders, and the managerial responsibility for the economically most effective use of the funds.

The violations of the law committed by the leadership cadres of the combine E. in the area of planning and use of the funds were the starting point for further illegal acts by subordinate employees, because over-all conditions had been created for disregarding state discipline and negating orderly work processes in the combine.

Individually, the following violations of the law must be listed:

1. Non-observance of basic VO regulations binding for every plant manager on planning, formation and use of the cultural and social fund for state enterprises of 3 June 1982 (GB1 I No 24 p 427).

This ordinance in article 2, paragraph 2 clearly establishes the goal of using the resources, and in article 3 details possible uses. Contrary to the requirements spelled out therein, funds were misused for undue purchases which were primarily used in the administrative area, so that a qualitative increase in working and living conditions in the focal plant areas and other plant installations did not take place.

Article 4, paragraph 5 of the ordinance requires that the use of the funds must be planned. This, however, was not done for the amounts spent as of September 1984. According to the findings, apparently there was only one managerial precept: to buy items first and without concept, and to decide on their use at a later time. Such items in particular demonstrate the gravity of the infringements of the law; they confirm that the basic goal of markedly improving working and living conditions of the workers was not of central importance.

The gravity of these violations of the law is also shown by the fact that the executive board of the combine's labor union was not informed, nor was its approval sought about the use of the fund, as required under article 4, paragraph 5 of the ordinance.

Through the over-all illegal dealings with the cultural and social fund, personal legal obligations and thus personal responsibility for control

and accountability according to article 6 of the ordinance were not carried out.

2. Non-observance of the A0 legal requirement on planning, formation and use of the bonus fund of state enterprises of 14 April 1983 (GB1 I No 11 p 121).

In principle, the same violations of the law were ascertained in the use of the bonus fund. This proves that the primary concern was to unduly free resources for purchases. Otherwise, they would have acted according to article 4, paragraph 1 of A0 and would have planned the use of the bonus fund in accordance with legal precepts. This also constitutes a grave disregard of the right of approval by labor unions according to article 4, paragraph 2 of the order. Even the rejection by the executive board of the combine's labor union of the planned use of the bonus fund, submitted in May 1984, was not a signal for the responsible managers to ensure work according to legal requirements.

3. Disregard of important regulations of the order on financing guidelines for state industry of 14 April 1983 (GB1 I No 11 p 110).

There exists a direct link between the violations of the law in using resources from the cultural and social, as well as the bonus fund, and the decisions taken for the use of planned, but not expended, amounts from the investment fund. Article 16 of the order of 14 April 1983 clearly establishes the tasks for the planning process of the investment fund. Contrary to these binding regulations, in November 1984 and January 1985 it was resolved to adjust an existing basic decision on an investment for improvement of working and living conditions in 1984 without informing, or coordinating it with, the State Bank. Thus conditions were created to "set free" funds from this source, also, for inadmissible purchases.

The deliberate infringement of legal norms is also demonstrated by the fact that the use of the purchased items, intended or eventually carried out, is contrary to article 18 of A0. The purchased items did not agree with the established list of items (article 18, paragraph 2) and in addition, they can hardly be classified as pertaining to working and living conditions. Furthermore, the effectiveness and efficiency of their use elsewhere in the combine is not based on the principles of socialist management. (This is listed in detail)

Through the arbitrary adjustment of the basic decision, important requirements for control of the planned financial means according to article 25 of A0 were evaded.

4. Violation of legal regulations to ensure a high degree of order and security in economic processes, particularly the order on purchasing industrial goods needed by the population, and utilization of performances by society's consumers of 1 November 1971 (GB1 II No 77 p 678).

This fact proves that the over-all nature of the purchases in the period from the second half of 1984 to the beginning of 1985 was characterized by a sometimes demonstrative disregard for legality and that egotistic factory interests predominated.

Article 1 of the order of 1 November 1971 establishes a binding limit for the purchase of high-quality industrial consumer goods from the manufacturer, the trade in capital goods, the wholesale and retail trade, but also establishes regulations for exceptions. Nonetheless, this regulation, important for the fulfillment of supply policy tasks, was repeatedly violated with the help of various manipulations. (This is elaborated)

##### 5. Violation of the labor unions' rights to codetermination and approval, clearly determined in article 24 of AGB (general operating conditions).

This is an extremely serious violation of socialist legality, since with the aid of the labor unions' right of approval, a qualified and expert assessment of the situation with regard to the effective use of the funds ensures and guarantees that the workers' interests and concerns are taken into account in these decisions, and that their rights are protected. A basic clarification of these problems was already needed in 1984 when the planned use of the bonus fund had been submitted in May and had been rejected by the labor union.

The extent of the violations of the law and their effects make it necessary that, in addition to dealing with these questions in principle in the combine management and determining measures which will ensure constant and orderly work in planning and use of the aforementioned funds, the personal legal responsibility for the ascertained infringements of the law is resolutely enforced. (This is described in detail)

##### Annotation:

Because of the fundamental significance of the protest, the public prosecutor general of the GDR informed the minister in charge and demanded that he institute necessary measures in his field of responsibility as well as educational consequences.

Simultaneously with the supervisory action lodged by the bezirk public prosecutor, which was also presented and justified orally in an expanded meeting of the combine leadership, management measures and conclusions for the combine and beyond were established under the responsibility of the minister in charge in order to prevent a repetition of these and similar violations of socialist law, and to ensure that the finances of the aforementioned funds are dealt with according to legal norms; that they are used in the interest of economic tasks and in particular, that they actually serve to improve working and living conditions of the workers and work collectives of the combine.

The serious breaches of duty by the combine director, the chief bookkeeper and two management cadres of the combine were immediately and resolutely

dealt with by the disciplinary authority. Included were the results of the hearings held by the kreis court to enforce material responsibility under the labor law in accordance with article 261, paragraphs 1 and 2 AGB, which the bezirk public prosecutor had asserted on the basis of the claim for damages to which the combine is entitled out of the sanctions imposed by the State Finance Auditing Office.

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END